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2008 Annual Compliance Monitoring Report Lawrence Livermore National Laboratory Site 300

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Acknowledgements

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1. Introduction

This Compliance Monitoring Report (CMR) summarizes the Lawrence Livermore National Laboratory (LLNL) Site 300 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Action compliance monitoring activities performed during January through December 2008. The report is submitted in compliance with the Compliance Monitoring Plan (CMP)/Contingency Plan (CP) for Interim Remedies at Lawrence Livermore National Laboratory Site 300 (Ferry et al., 2002). As agreed to with the Regional Water Quality Control Board (RWQCB), the Central and Eastern General Services Area (GSA) monitoring data, which were collected in compliance with the GSA CMP (Rueth, 1998) and Eastern GSA post-shutdown monitoring requirements (Holtzapple, 2007) are also included in this report.

During the reporting period of January through December 2008, approximately 10 million gallons of ground water and 81 million cubic feet of soil vapor were treated at Site 300, removing approximately 18 kilograms (kg) of volatile organic compounds (VOCs), 130 grams (g) of perchlorate, 1,300 kg of nitrate, 210 g of Research Department Explosive (RDX), and 6.8 g of a mixture of tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) (Table Summ-1).

Since remediation began in 1991, approximately 367 million gallons of ground water and over 402 million cubic feet of soil vapor have been treated, removing approximately 520 kg of VOCs, 790 g of perchlorate 6,600 kg of nitrate, 1.1 kg of RDX, and 9.5 kg of TBOS/TKEBs (Table Summ-2).

2. Extraction and Treatment System Monitoring and Ground and Surface Water Monitoring Programs

Section 2 presents the monitoring results for the Site 300 remediation systems, ground water monitoring network, and surface water sampling and analyses. These results are presented and discussed by operable unit (OU) as follows:

2.1. General Services Area OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill OU 3

2.4. High Explosive Process Area (HEPA) OU 4

2.5. Building 850 OU 5

2.6. Building 854 OU 6

2.7. Building 832 Canyon OU 7

2.8. Site-Wide OU 8 (Building 833, Building 801, Building 845, Building 851)

The locations of the Site 300 OUs are shown in Figure 2-1. The Pit 2, 8, and 9 Landfills (OU 8) are discussed in Section 3.

Total VOC isoconcentration contour maps were constructed by summing the results of the following VOCs: trichloroethene (TCE); tetrachloroethene (PCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); carbon tetrachloride; chloroform;

1,1-dichlorethane (1,1-DCA); 1,2-dichlorethane (1,2-DCA); 1,1-dichloroethene (1,1-DCE); 1,1,1-trichloroethane (1,1,1-TCA); trichlorofluoromethane (Freon 11); 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113); 1,1,2-trichloroethane (1,1,2-TCA); and vinyl chloride. The resultant sums were rounded to two significant figures before plotting on the maps.

Second semester 2008 data were used for primary contaminants of concern (COC) isoconcentration contour maps. The primary COC data were over-laid onto second semester extent of saturation so that the concentration data would agree temporally with the ground water level data. Secondary COC data were obtained from first semester 2008 sampling events, so these contours were over-laid onto first semester extent of saturation. As a result, in some cases the maximum concentration reported in the text for a particular COC might not agree with the posted value on the contour map because the maximum concentration sample was collected during the other semester.

Estimated hydraulic capture associated with extraction wells and estimated areas of hydraulic influence associated with injection of treated ground water are presented in the semi-annual CMRs. The capture zones are defined only for extraction and injection wells that were active at the time that the ground water elevations were measured. The capture zones presented in this report differ from those presented in the Site-Wide Remediation Evaluation Summary Report (Ferry et al., 2006), because the Site-Wide Remediation Evaluation Summary Report capture zones were estimated using computer models such as Winflow or FEFLOW, whereas the CMR capture zones are based primarily on the equipotentials of the ground water elevation contour maps. As a general rule the capture zones were extended to two upgradient ground water elevation contours. For cases where control is sparse, a Thiem solution for steady-state radial flow in the vicinity of a pumping well was used to control the ground water elevation contours. Hydraulic capture and injection zones are displayed on ground water elevation and primary and secondary COC maps for all OUs where active ground water remediation is occurring (i.e., OU 1, OU 2, OU 4, OU 6, and OU 7).

To present a contemporaneous view of ground water elevations and COC plumes, the maps were constructed using the quarterly sampling data set available with the most complete geographic coverage for the 6-month reporting period. In some cases where multiple samples were collected during the selected quarter, the maximum concentration detected is presented on the COC plume map. In some rare cases, where additional samples were collected during the reporting period but not the selected quarter depicted on the COC plume map, the maximum detection for a particular well may not be shown on the COC plume map. Specific ground water monitoring data are discussed within each OU section of this report and all ground water analytical data are included in the data tables presented in the annual report.

Treatment facility operations and maintenance issues that occurred during the second semester of 2008 and influent and effluent analytical data collected during second semester 2008 are included in this report. Treatment facility pH data collected during the second semester of 2008 are presented in Appendix A. Ground and surface water monitoring analytical data and ground water elevation measurements for the entire calendar year 2008 are presented in Appendices B and C, respectively. The Building 834 T2 Area *in situ* bioremediation data is included in Appendix D.

Table 2-1 lists the piezometers installed during 2008. There were no borehole soil samples collected and analyzed during 2008.

2.1. General Services Area (GSA) OU 1

The GSA OU consists of the Eastern and Central GSA areas.

The source of contamination in the Eastern GSA is an abandoned debris burial trench that received craft shop debris. Leaching of solvents in the debris resulted in the release of contaminants to ground water.

A ground water extraction and treatment system (GWTS) operated in the Eastern GSA from 1991 to 2007 to remove VOCs from ground water. VOC-contaminated ground water was extracted from three wells (W-26R-03, W-25N01, and W-25N-24), located downgradient from the debris burial trenches, at a combined flow rate of 45 gallons per minute (gpm). The extracted ground water was treated in three 1,000-pound (lb) granular activated carbon units that removed VOCs through adsorption. The treated effluent water was discharged to nearby Corral Hollow Creek.

Remediation efforts in the Eastern GSA have successfully reduced concentrations of TCE and other VOCs in ground water to below their respective cleanup standards set in the GSA Record of Decision (ROD) (United States [U.S.] Department of Energy [DOE], 1997). The Eastern GSA ground water extraction and treatment system was shut off on February 15, 2007 with the U.S. Environmental Protection Agency (EPA), RWQCB, and California Department of Toxic Substances Control (DTSC) approval. As required by the GSA ROD, ground water monitoring will be conducted for 5 years after shutdown to determine if VOC concentrations rise or “rebound” above cleanup standards. VOC concentrations remain below their cleanup standards after 1 year and 10 months following shutdown of the treatment facility.

A map of the Eastern GSA, showing the locations of monitoring and extraction wells and the treatment facility is presented in Figure 2.1-1.

At the Central GSA, chlorinated solvents, mainly TCE, were used as degreasing agents in craft shops, such as Building 875. Rinse water from these degreasing operations was disposed of in dry wells. Typically, dry wells were gravel-filled holes about 3 to 4 feet (ft) deep and two ft in diameter. The Central GSA dry wells were used until 1982. In 1983 and 1984, these dry wells were decommissioned and excavated.

The Central GSA GWTS began operation since 1992 removing VOCs from ground water. Contaminated ground water is extracted from eight wells (W-7I, W-875-07, W-875-08, W-873-07, W-872-02, W-7O, W-7P, and W-7R) at an approximate combined flow rate of approximately 2.0 to 3.0 gpm. The Central GSA GWTS began receiving partially treated water from the Building 830-Distal South (830-DISS) facility at the end of the first semester 2007, increasing the flow rate to approximately 5.0 to 6.0 gpm. The current GWTS configuration includes particulate filtration, air stripping to remove VOCs from extracted water, and granular activated carbon (GAC) to treat vapor effluent from the air stripper. Treated ground water is discharged to the surrounding natural vegetation using misting towers. Treated vapors are discharged to the atmosphere under permit from the San Joaquin Valley Unified Air Pollution Control District.

The Central GSA soil vapor extraction and treatment system (SVTS) began operation in the GSA adjacent to the Building 875 dry well contaminant source area in 1994 removing VOCs from soil vapor. Four wells (W-875-07, W-875-08, W-7I, and W-875-10) were initially utilized to extract soil vapor at an approximate flow rate of 17.6 standard cubic feet per minute (scfm).

Soil vapor extraction from the entire wellfield (W-7I, W-875-07, W-875-08, W-875-09, W-875-10, W-875-11, and W-875-15) was initiated in November 2007 after installation of individual vapor flow meters, increasing the total flow rate to greater than 35 scfm. Simultaneous ground water extraction in the vicinity lowers the elevation of the ground water surface and maximizes the volume of unsaturated soil influenced by vapor extraction. The current SVTS configuration includes a water knockout chamber, a rotary vane blower, and four 140-lb vapor-phase GAC columns arranged in series. Treated vapors are discharged to the atmosphere under permit from the San Joaquin Valley Unified Air Pollution Control District.

A map of the Central GSA, showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.1-2.

2.1.1. GSA Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into five subsections: facility performance assessment; operations and maintenance issues; receiving water monitoring; compliance summary; and sampling plan evaluation and modifications.

2.1.1.1. GSA Facility Performance Assessment

As discussed above, the Eastern GSA GWTS has been shut down since February 15, 2007. Subsequently, only the Central GSA treatment system data will be presented in this report. The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.1-1. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period is presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed is summarized in Table Summ-2. Analytical results for influent and effluent samples are shown in Tables 2.1-2 and 2.1-3. The pH measurement results are presented in Appendix A.

2.1.1.2. GSA Operations and Maintenance Issues

There were no operations and maintenance issues at the Eastern GSA GWTS since it was shut down on February 15, 2007 because ground water cleanup standards have been achieved (see Section 2.1).

The following maintenance and operational issues interrupted continuous operations of the Central GSA GWTS and SVTS during second semester:

- A new transducer was installed in extraction well W-7O on July 14.
- The Central GSA compressor failed on July 16th shutting down extraction wells W-7P, W-7R, W-875-07, W-875-08, W-872-02, and W-873-07. The GWTS continued to operate on extraction well W-7O and 830-DISS extraction wells W-830-51 and W-830-2216. The SVTS continued to operate on extraction wells W-875-09, W-875-10, W-875-11, and W-875-15. However, the SVTS was shut down on July 23 due to upconing of ground water. The compressor was repaired and the Central GSA GWTS and SVTS were restarted on August 11. The compressor began to show signs of failing again so an airline from a compressor in Building 875 was connected to the Central GSA on August 21 to allow continued ground water and soil vapor extraction. A new compressor was installed at the Central GSA in November.

- The pump in extraction well W-875-08 failed on August 20 and was repaired on August 26. The pump in extraction well W-7R was found to be offline on September 29 and was restarted on October 14.
- The Central GSA GWTS and SVTS were shut down on November 10 to upload software. A small leak in the piping connecting the Central GSA facility to the well pumps and the 830-DISS was discovered. The pipe section was replaced and the facilities were restarted on November 17.
- Central GSA extraction wells W-7P and W-7R were turned off on December 7 to repair a cracked airline. The airline was repaired on December 11, however, the wells remained off for the rest of the reporting period to prevent damage from freezing temperatures. The GWTS continues treating ground water from the remaining extraction wells. The SVTS was shut down to prevent damage due to freezing temperatures. In colder weather, condensation tends to increase in both the GAC units and the water knock-out drum; reducing the contaminant removal efficiency of the GAC and increasing the potential for freeze damage to the knock-out drum.

2.1.1.3. GSA Compliance Summary

The Central GSA GWTS operated in compliance with the Substantive Requirements for Wastewater Discharge during the second semester 2008. The Central GSA SVTS system operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

2.1.1.4. GSA Facility Sampling Plan Evaluation and Modifications

The Central GSA treatment facility sampling and analysis plan complies with Substantive Requirements and the GSA CMP (Rueth, 1998) monitoring requirements. The treatment facility sampling and analysis plan is presented in Table 2.1-4. No modifications were made to the plan during this reporting period.

2.1.1.5. GSA Treatment Facility and Extraction Wellfield Modifications

No modifications were made to the CGSA GWTS, SVTS, or the extraction wellfield during this reporting period.

2.1.2. GSA Surface Water and Ground Water Monitoring

The sampling and analysis plans for ground water monitoring at the Central and Eastern GSA are presented in Tables 2.1-5 and 2.1-6, respectively. These tables also delineate and explain deviations from the sampling plan and indicate any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the Central GSA CMP and Eastern GSA post-shutdown monitoring requirements with the following exceptions; three required analyses were not performed due to pump failure, one required analysis was not performed due to a flooded Cristy box, one required analysis was inadvertently left off the plan, and eighteen required analyses were not performed because there was insufficient water in the wells to collect the samples.

Ground water elevation contours and hydraulic capture zones for the extraction wells that were active during first semester for the Eastern and Central GSA are presented in Figures 2.1-3 and 2.1-4, respectively.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.1.3. GSA Remediation Progress Analysis

This section is organized into four subsections: mass removal; analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

2.1.3.1. GSA Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Table 2.1-7. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

2.1.3.2. GSA Contaminant Concentrations and Distribution

VOCs are the primary COC in ground water at the GSA OU. VOCs are present at very low concentrations in ground water within Quaternary alluvial deposits (Qal) that directly overlie the $Tnbs_1$ bedrock in the Eastern GSA. A total VOC isoconcentration contour map based on data collected during the second semester 2008 for this shallow Qal-$Tnbs_1$ hydrostratigraphic unit (HSU) is presented on Figure 2.1.5.

Since extraction and treatment began at the Eastern GSA in 1991, TCE concentrations in ground water have decreased from a historic maximum of 74 micrograms per liter (µg/L) (W-26R-03, January 1992) to below analytical reporting limits (0.5 µg/L) in the majority of wells and to below the 5 µg/L cleanup standard for TCE in all wells. Within the Qal-$Tnbs_1$ HSU, total VOC concentrations detected in samples during the second semester 2008 ranged from 4.2 µg/L (W-26R-01, October 2008) to <0.5 µg/L. VOCs were not detected in ground water samples from wells in the deeper $Tnbs_1$ HSU during second semester 2008. Second semester 2008 data indicate that TCE and other VOCs have not rebounded significantly and continue to remain below their cleanup standards in all wells since the Eastern GSA GWTS was shutdown in February 2007.

VOCs are the only COCs in ground water and soil vapor at the Central GSA. There are three primary HSUs in the Central GSA:

- Qt-$Tnsc_1$ HSU, a shallow water-bearing zone in the western portion of the Central GSA. This HSU includes saturated Qt deposits, and the $Tnbs_2$ sandstone and $Tnsc_1$ siltstone/claystone bedrock units that subcrop beneath the Qt.
- $Tnbs_1$ HSU, a deeper regional aquifer within the western portion of the Central GSA which consists of $Tnbs_1$ sandstone bedrock.
- Qal-$Tnbs_1$ HSU, a shallow water-bearing zone within the eastern portion of the Central GSA. In the eastern portion of the Central GSA (near the sewage treatment pond), Qt deposits and the $Tnbs_2$ and $Tnsc_1$ bedrock units are not present. Qal deposits directly overlie the shallow $Tnbs_1$ bedrock that comprises the Qal-$Tnbs_1$ HSU in this area.

A VOC plume exists within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs in the Central GSA. A total VOC isoconcentration contour map based on data collected during the second semester 2008 for these HSUs is presented on Figure 2.1.6. The total VOC contour map depicts areas of hydraulic capture highlighted in blue that are based on ground water elevation data collected in November 2008.

Within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs, total VOC concentrations during second semester 2008 ranged from a maximum of 380 µg/L (W-875-08, October 2008) to <0.5 µg/L. The maximum total VOC ground water concentration continues to be located in the dry well pad area. During second semester 2008, total VOCs were detected in offsite monitoring wells W-35A-01, W-35A-09, and W-35A-10 at concentrations of 2.9, 0.79, and 10 µg/L, respectively. Prior to remediation, the maximum total VOC concentration detected in Central GSA ground water was 272,000 µg/L (W-875-07, 1992), compared to the second semester 2008 concentration of 340 µg/L in the same well. This decline in VOCs demonstrates the efficacy of ongoing cleanup operations. The fact that VOCs were not detected in ground water samples from any of the deeper $Tnbs_1$ HSU wells in the CGSA demonstrate the VOC plume is being adequately captured by the extraction wellfield.

A TCE soil vapor concentration contour map is presented on Figure 2.1-7 and depicts the extent of TCE vapor in October 2008. The extent of the vapor plume is similar to that depicted during the first semester 2008 and the magnitude increased slightly. The maximum TCE vapor concentrations in first and second semesters 2008 were 2.6 $ppm_{v/v}$ and 9.4 $ppm_{v/v}$, respectively. The maximum historical TCE vapor concentration is 531 $ppm_{v/v}$ (W-875-07, November 1999) collected at the end of a rebound test.

2.1.3.3. GSA Remediation Optimization Evaluation

By 2007, ground water extraction and treatment had reduced VOC concentrations in all Eastern GSA wells to below the GSA ROD ground water cleanup standards and TCE concentrations to below analytical reporting limits (0.5 µg/L) in the majority of wells. In January of 2007, DOE/LLNL proposed to initiate the "Requirements for Closeout" described in the Remedial Design document for the GSA OU (Rueth et al., 1998). These requirements specify: *when VOC concentrations in ground water have been reduced to cleanup standards, the ground water extraction and treatment system will be shut off and placed on standby*. The U.S. EPA, RWQCB, and DTSC approved this proposal and the Eastern GSA ground water extraction and treatment system was turned off and effluent discharge to Corral Hollow Creek was discontinued on February 15, 2007, thereby meeting the Substantive Requirements. As required by the GSA ROD, ground water monitoring is being conducted to determine if VOC concentrations rebound above cleanup standards. As of the end of the first semester 2008, VOCs have not been detected in any Eastern GSA wells above cleanup standards. In the Eastern GSA Compliance Feasibility Report submitted to regulatory agencies on July 15, 2007, DOE/LLNL evaluated onsite discharge options that could be implemented if VOC concentrations rebound above cleanup standards requiring that the Eastern GSA extraction and treatment system be restarted.

At the Central GSA, ground water extraction continues to adequately capture the highest VOC concentrations in ground water, as shown by capture zones on Figure 2.1-4. One extraction well (W-7P) did not produce water during the majority of the second semester; therefore, a capture zone was not depicted for this well. During second semester 2008, extraction wells W-7O and W-7R removed the majority of the ground water while wells W-875-07, W-875-08, and W-7O removed most of the dissolved VOC mass.

Significantly more VOC mass is being removed by soil vapor extraction than by ground water extraction. During second semester 2008, 0.15 kg of VOCs were removed from ground water, whereas 1.02 kg of VOCs were removed from vapor. Based on individual well vapor flow monitoring for the second semester 2008, SVE wells W-7I, W-875-09, W-875-11, and W-875-15 removed most of the vapor mass. The SVE wellfield configuration will continue to be monitored and evaluated. Changes to the SVE well configuration will be made as part of ongoing optimization activities.

2.1.3.4. GSA OU Remedy Performance Issues

There were no new issues that affect the performance of the cleanup remedy for the GSA OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.2. Building 834 OU 2

The Building 834 Complex has been used to test the stability of weapons and weapon components under various environmental conditions since the 1950s. Past spills, piping leaks, and septic system leachate at the Building 834 Complex have resulted in soil and ground water contamination with VOCs, TBOS/TKEBs, and nitrate. In addition, a former underground diesel storage tank released diesel to the subsurface. A map of Building 834 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.2-1.

The Building 834 GWTS and SVTS began operation in 1995 and 1998, respectively. These systems are located in the main part of the Building 834 Complex, referred to as the Building 834 core area. The GWTS removes VOCs and TBOS/TKEBs from ground water within the Tpsg HSU and the SVTS removes VOCs from soil vapor. The area immediately to the southwest of the core area is the leachfield area and further to the south is the distal (T2) area. Due to the very low ground water yield from individual ground water extraction wells (<0.1 gpm), the GWTS and SVTS have been operated simultaneously in batch mode. Although the GWTS can be operated alone, the SVTS is not operational without ground water extraction due to the upconing of the ground water in the well that covers the well screen and prevents soil vapor flow.

The current extraction wellfield consists of 13 extraction wells for both ground water and soil vapor extraction. Ten extraction wells (W-834-B2, -B3, -D4, -D5, -D6, -D7, -D12, -D13, -J1, and -2001) are located within the core area and three (W-834-S1, -S12A, and -S13) in the leachfield portion of the distal area. Extraction well W-834-D5 is connected to the facility but has not been used for extraction since the facility was restarted in October 2004 because the capture area is similar to the capture area of extraction well W-834-D13. Ground water and soil vapor extraction well W-834-2001 was added to the system in March 2007. Extracted ground water from this well contains dissolved-phase diesel related to the former underground diesel storage tank. The GWTS extracts ground water at an approximate combined flow rate of 0.23 gpm and the SVTS extracts soil vapor at a combined flow rate of approximately 103 scfm. The current GWTS configuration includes floating hydrocarbon adsorption devices to remove the floating silicon oil, TBOS/TKEBs, and any floating diesel, followed by aqueous-phase GAC to remove VOCs, dissolved-phase TBOS/TKEBs, and diesel from ground water. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. The current SVTS configuration includes vapor-phase GAC for VOC removal. Treated vapors are discharged to the atmosphere under an air permit from the San Joaquin Valley Unified Air Pollution Control District.

2.2.1. Building 834 OU Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modification.

2.2.1.1. Building 834 OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.2-1. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period is presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed is summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Tables 2.2-2 through 2.2-5. The pH measurement results are presented in Appendix A.

2.2.1.2. Building 834 OU Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the Building 834 GWTS and SVTS during second semester:

- Misting heads were cleaned and/or replaced on November 5.
- The GWTS and SVTS were shut down on December 9 and remained off for the rest of the reporting period to prevent freeze damage due to freezing temperatures. The SVTS was turned off due to the potential for increased condensation and freeze damage, and because the SVTS cannot be operated without the GWTS in operation.

2.2.1.3. Building 834 OU Compliance Summary

The Building 834 GWTS operated in compliance with the Substantive Requirements for Wastewater Discharge. The Building 834 SVTS operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

2.2.1.4. Building 834 OU Facility Sampling Plan Evaluation and Modifications

The Building 834 treatment facility sampling and analysis plan complies with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.2-6. There were no modifications made to the plan during the reporting period.

2.2.1.5. Building 834 OU Treatment Facility and Extraction Wellfield Modifications

No modifications to the treatment facility or to the extraction wellfield occurred during this reporting period.

2.2.2. Building 834 OU Ground Water Monitoring

The sampling and analysis plan for ground water monitoring is presented in Table 2.2-7. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During this reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; seventy-nine required analyses were not performed because there was insufficient water in the wells to collect the samples.

Ground water elevation contours and hydraulic capture zones for the extraction wells that were active during first semester for the Tpsg HSU are presented in Figure 2.2-2. Ground water elevations for the Tps-Tnsc$_2$ HSU are posted in Figure 2.2-3.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.2.3. Building 834 OU Remediation Progress Analysis

This section is organized into four subsections: mass removal, analysis of contaminant distribution and concentration trends, remediation optimization evaluation, and performance issues.

2.2.3.1. Building 834 OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Table 2.2-8. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

2.2.3.2. Building 834 OU Contaminant Concentrations and Distribution

At the Building 834 OU, VOCs are the primary COCs detected in ground water; TBOS/TKEBs and nitrate are the secondary COCs. These COCs have been identified in two shallow HSUs: 1) the Tpsg perched water-bearing gravel zone and 2) the underlying Tps-Tnsc$_2$ perching horizon.

Total VOC concentration data are contoured for the Tpsg HSU and posted for the Tps-Tnsc$_2$ HSU based on data collected during the second semester 2008 and are presented on Figures 2.2-4 and 2.2-5, respectively. Secondary COC concentrations for ground water samples collected during the first semester 2008 are posted and presented on Figures 2.2-6 and 2.2-8 for the perched Tpsg HSU and on Figures 2.2-7 and 2.2-9 for the Tps-Tnsc$_2$ HSU.

2.2.3.2.1. Total VOCs Contaminant Concentrations and Distribution

While the overall extent of total VOCs in the Building 834 OU ground water and soil vapor have not changed significantly, the maximum concentrations have decreased by more than an order-of-magnitude since remediation began in the mid 1990s.

The highest VOC concentrations for both vapor and ground water continue to be detected in the 834 Core Area. Active remediation has reduced total VOC ground water concentrations in the more permeable Tpsg HSU from a pre-remediation maximum of 1,060,000 µg/L (W-834-D3, 1993) to a second semester 2008 maximum concentration of 66,000 µg/L (W-834-C5, August 2008). The underlying Tps-Tnsc$_2$ HSU currently exhibits the highest total VOC ground water concentrations in OU 2 at 190,000 µg/L (W-834-A1, August 2008). Total VOC ground water concentration trends in this HSU have decreased or remained stable since monitoring of this HSU began in 1994. Second semester 2008 TCE vapor concentrations from the Core Area SVE wells ranged from 0.01 to 13 $ppm_{v/v}$. These concentrations have decreased significantly from the pre-remediation Core Area TCE vapor concentration of 3,200 $ppm_{v/v}$ detected in 1989.

In the Leachfield Area, total VOC concentrations in the Tpsg HSU have decreased by an order-of-magnitude, from a pre-remediation maximum of 179,200 µg/L (W-834-S1, 1988) to a second semester 2008 maximum concentration of 9,600 µg/L (W-834-2113, August 2008). The total VOC concentrations in the underlying Tps-$Tnsc_2$ HSU in the Leachfield Area are significantly lower than Tps-$Tnsc_2$ VOC concentrations in the Core Area. The second semester 2008 maximum total VOC concentration in the Tps-$Tnsc_2$ HSU ground water was 4,200 µg/L (W-834-S8, July 2008) in the Leachfield Area. This HSU has exhibited decreasing or stable trends since monitoring began in 1989. Second semester 2008 TCE vapor concentrations from the Tpsg HSU in the Leachfield Area ranged from 0.64 to 4.8 $ppm_{v/v}$. These concentrations are significantly lower than the maximum pre-remediation Leachfield Area TCE vapor concentration of 710 $ppm_{v/v}$ measured in 2004.

In the Distal Area, total VOC concentrations in the Tpsg HSU have decreased from a historic maximum of 86,000 µg/L (W-834-T2A, 1988) to a second semester 2008 maximum concentration of 13,000 µg/L (W-834-T2A, September 2008). The underlying Tps-$Tnsc_2$ HSU is monitored by one well, W-834-2119. The total VOC concentration in this well was 13,000 µg/L measured during the second semester 2008. Historic total VOC concentrations in this well have not changed significantly. This well continues to be closely monitored because it is located near an ongoing *in situ* bioremediation experiment. *In situ* bioremediation is being evaluated for this area as part of a long-term treatability test and the current status is described in Section 2.2.3.4. The total VOC concentrations in the area impacted by the bioremediation experiment have decreased significantly due to a combination of *in situ* biodegradation and dilution.

TCE biodegradation continues within the Core Area where significant amounts of TBOS are present and serve as an electron donor for intrinsic *in situ* biodegradation. The primary byproduct of this biodegradation has historically been cis-1,2-DCE, although limited vinyl chloride has also been detected. Both cis-1,2-DCE and vinyl chloride were detected in Core Area ground water in second semester 2008. While low concentrations of the electron donor TBOS and the breakdown product cis-1,2-DCE have been periodically detected in some Leachfield Area wells, no vinyl chloride has ever been detected in this area. This indicates that while some intrinsic biodegradation may be taking place in this area, the biodegradation reaction may not be complete.

Total VOC concentrations and its extent in ground water are expected to continue to decrease over time as remediation progresses. The deep regional $Tnbs_1$ aquifer continues to be free of contaminants as demonstrated by the absence of VOC detections above the reporting limit (0.5 µg/L) in $Tnbs_1$ guard wells, W-834-T1 and W-834-T3 that are monitored on a quarterly basis.

2.2.3.2.2. TBOS/TKEBS Contaminant Concentrations and Distribution

The maximum TBOS/TKEBS ground water concentration has decreased from a historic maximum of 7,300,000 µg/L (W-834-D3, 1995) to 780 µg/L (W-834-D4, July 2008). This compound is found exclusively in the Core Area. Historically, floating product has been measured intermittently in some Core Area wells; however, no floating product was observed during the second semester 2008. TBOS/TKEBS concentrations in Tpsg HSU wells in the Leachfield and Distal Area continue to be below reporting limits during the first semester 2008.

Both the concentrations and extent of TBOS/TKEBS in ground water are greater in the Tpsg HSU than in the underlying Tps-$Tnsc_2$ HSU perched horizon. During 2008, TBOS/TKEBS was detected in only one Tps-$Tnsc_2$ HSU well at a concentration of 33 µg/L (W-834-1711, January 2008). TBOS/TKEBS continues to remain below reporting limits in guard wells W-834-T1 and W-834-T3.

2.2.3.2.3. Nitrate Contaminant Concentrations and Distribution

During 2008, nitrate was detected in ground water at concentrations exceeding the 45 mg/L cleanup standard in the Building 834 Core, Leachfield, and Distal Areas in the Tpsg and Tps-$Tnsc_2$ HSUs. Nitrate concentrations in Tpsg HSU ground water ranged from a maximum of 310 mg/L (W-834-S7, February 2008) to below the 0.5 mg/L reporting limit. In the Core Area, nitrate concentrations in the Tpsg HSU vary spatially and temporally related to denitrification associated with ongoing intrinsic *in situ* biodegradation. In the underlying Tps-$Tnsc_2$ HSU, nitrate concentrations ranged from a maximum of 99 mg/L (W-834-2119, January 2008) to below the 0.5 mg/L reporting limit.

A combination of both natural and anthropogenic (e.g., septic) sources contribute to the nitrate in Building 834 OU ground water. While nitrate concentrations have decreased from a historic maximum of 749 mg/L (W-834-K1A, 2000), the continued elevated nitrate concentrations indicate an ongoing source of ground water nitrate. The primary source of nitrate is most likely the septic system leachfield. Additional natural sources in the Tpsg and underlying Tps-$Tnsc_2$ may also contribute nitrate.

Nitrate was not detected in the deep $Tnbs_1$ HSU guard wells W-834-T1 and W-834-T3 during second semester 2008.

2.2.3.2.4. Other Contaminant Concentrations and Distribution

The extent of diesel in ground water is limited to the area near a former underground storage tank located beneath the paved portion of the Core Area. During 2008, diesel was detected in well W-834-A2 (210 µg/L, February), and in well W-834-2001 (180,000 µg/L in January, 81,000 µg/L in July, and 71,000 µg/L in October).

Benzene, toluene, ethylbenzene, and xylenes (BTEX) monitoring was conducted in thirteen Building 834 OU wells during 2008. No BTEX compounds were detected in these wells. However, BTEX have been historically detected in as many as ten wells; these concentrations are likely related to the former underground storage tank. BTEX analytical data will continue to be evaluated to support a reduction in monitoring.

In 2008, chromium samples were collected from six Core Area wells that were affected by improperly wired pressure transducers that produced electrical short circuits in 2000. Chromium concentrations were significantly below the 0.05 mg/L Maximum Contaminant Level (MCL) in these wells. Since chromium concentrations have not exceeded the MCL since 2005, chromium monitoring will be discontinued.

In 2008, samples were collected from two wells (W-834-S7 and W-834-2118) to monitor perchlorate. Perchlorate was detected in ground water from well W-834-S7 (10 µg/L in

February and August) and well W-834-2118 (4.6 µg/L in February and 4 µ g/L in August). Ground water monitoring for perchlorate will continue semi-annually for these two wells. The origin of perchlorate in this area is unknown.

2.2.3.3. Building 834 OU Remediation Optimization Evaluation

Dual-phase extraction and treatment continued throughout the second semester 2008 with the exceptions discussed in Section 2.2.1.2. During the second semester 2008, no modifications were made to the extraction well fields for either the Core or the Leachfield Areas.

During the second semester 2008, all Core Area ground water extraction wells were operational. As shown on Figure 2.2-4, the capture zones from Core Area extraction wells adequately capture the highest total VOC concentrations in this area. Within the Leachfield Area, extraction well W-834-S1 captures the largest extent of ground water compared with the other two leachfield extraction wells (W-834-S13 and W-834-S12A) exhibit significantly less yield and produce much smaller capture zones. Leachfield Area monitoring well W-834-2113 yielded total VOC concentrations of 49,000 and 9,600 µg/L, during first and second semester 2008, respectively. During first semester 2008, the Leachfield Area extraction wells were not operating in January, the month ground water samples were collected; this likely caused the decrease in concentrations observed in ground water from well W-834-2113.

Significantly more VOC mass is being removed by soil vapor extraction than by ground water extraction. During second semester 2008, 0.80 kg of VOCs were removed from ground water in the Building 834 OU, whereas 7.43 kg of VOCs were removed from vapor. The preponderance of VOC ground water mass was removed from the Core Area (82.5% or 0.66 kg), whereas the majority of vapor mass was removed from the Leachfield Area (67% or 5.02 kg).

The total VOC trends in the underlying Tps-Tnsc$_2$ HSU will continue to be monitored closely to evaluate beneficial impacts from active remediation of the overlying Tpsg HSU and injection operations associated with enhanced *in situ* bioremediation activities. Conventional pump and treat operations in this low yield, fine-grained HSU are not expected to be effective in reducing VOC concentrations to meet cleanup standards. The use and feasibility of enhanced *in situ* remediation techniques, such as reagent injection and bio-augmentation, are still under consideration, to remediate this HSU.

2.2.3.4. T2 Treatability Study

The T2 treatability study, which began in 2005, continued during 2008. One of the primary objectives of this study is to assess the performance of passive *in situ* bioremediation of TCE at concentrations greater than 10 µg/L in a low yield water-bearing zone (Tpsg HSU) that is typical of VOC source areas at Site 300. The technology is considered *passive* because it relies solely on injection of nutrients and bacteria without the aid of any active extraction wells. In this treatability study, an isotopically distinct conservative tracer, Hetch-Hetchy (H-H) water, and light hydrocarbon (LHC) analysis of TCE breakdown products, such as ethene, are being used to distinguish bacterial dechlorination of TCE from hydraulic displacement and dilution of the plume resulting from reagent injection. During this phase of the study, Tpsg ground water was bioaugmented with a consortium of dechlorinating bacteria (KB-1) that contain a strain of *Dehalococoides* capable of complete dechlorination of TCE to ethene.

Nearly continuous injection of H-H water into Tpsg well W-834-1824 continued throughout the year until late December 2008 along with bi-weekly additions of electron donor, sodium lactate (Na Lactate), to promote reducing conditions within the treatment zone suitable for bioaugmentation. About 2,800 gallons of H-H water and about 100 gallons of Na Lactate were injected during 2008. Ground water within the treatment zone became anoxic (dissolved oxygen [DO] < 3 mg/L) and oxidation/reduction potential (ORP) fell below -200 millivolts (mv) by early July (Appendix D). These results indicated significant reducing conditions suitable for bioaugmentation. On August 5, 2008, well W-834-1825 was bioaugmented by injecting a 10-liter slurry containing KB-1. In preparation for the bioaugmentation, four liters of Na Lactate were added to W-834-1825 in July 2008; an additional 500 milliliters were added following bioaugmention in August 2008 to ensure that adequate levels of electron donor were present to promote bacterial dechlorination.

Below average rainfall and minimal recharge during 2008 resulted in ground water levels that generally declined in the treatment zone despite nearly continuous injection of H-H water. In terms of total VOC concentrations, two of the five performance monitoring wells (W-834-T2 and W-834-1825) declined significantly while the other three performance monitoring wells (W-834-1833, W-834-T2A and W-834-T2D) exhibited little to no change. The decline in total VOC concentrations is likely due to a combination of dilution and displacement by H-H water injection and VOC destruction due to bacterial dechlorination. Evidence of complete dechlorination of TCE to ethene was observed in well W-834-T2 and bioaugmentation well W-834-1825 during the third and fourth quarters of 2008. For example, W-834-1825 contained 82 µg/L of ethene four months after bioaugmentation. This is the first detection of ethene in this well. Significant levels of vinyl chloride (350 µg/L) and ethene (1,300 µg/L) were detected in W-834-T2 within three months after bioaugmentation. These results were unexpected because W-834-T2 is hydraulically up gradient of bioaugmentation well W-834-1825. There are at least two possible explanations for these observations: (1) a hydraulic connection exists between bioaugmentation well W-834-1824 and W-834-T2 via a preferential pathway and KB-1 bacteria injected into well W-834-1825 in August migrated “upgradient” to well W-834-T2 by November; or (2) a complete dechlorination of TCE was achieved at well W-834-T2 by indigenous bacteria and electron donor addition. The second scenario was not supported by the microcosm study that indicated electron donor alone could not lead to complete dechlorination.

One of the potential water quality impacts of this *in situ* technology is methane production and metals dissolution in the treatment zone. For example, methane increased to 2,300 µg/L in W-834-T2 and to 8,000 µg/L in W-834-1825 after significant additions of Na Lactate (Appendix D). However, the methane production appears to be confined to the treatment zone in the immediate vicinity of these two wells. For example, methane levels in nearby well W-834-1833 remained below 2 µg/L as of November 2008. Only one metal, manganese, has increased from less than 10 µg/L to 23 µg/L in ground water from well W-834-T2 and to 12 µg/L in ground water from well W-834-1825 as of June 2008 (Table B-2.5). The MCL for manganese is 50 µg/L. Another water quality concern related to Na Lactate injection is salinity impact. Salinity is closely tracked in this study by monitoring specific conductance using YSI probes in performance wells W-834-T2, W-834-1825 and W-834-1833. Based on these *in situ* probes, specific conductance increased by an order-of-magnitude in the two wells (W-834-1824 and W-834-1825) where Na Lactate was injected directly. Note that during the tracer test phase of this study, when only low salinity H-H water was being injected into W-834-1824, salinity increases were also observed but these increases were presumably related to dissolution of salts in the vadose zone between the H-H injection well and the performance wells. During 2008, an increase in specific conductance was observed in ground water from well W-834-T2 after June, whereas the specific conductance in ground water from well W-834-1833 remained essentially constant throughout the year. The increase in specific conductance in ground water from well W-834-T2 is probably due to a combination of Na Lactate injection and natural salts in the vadose zone. One of the water quality benefits of sustaining reducing conditions is denitrification. Nitrate concentrations have declined by up to an order-of-magnitude in the treatment zone due to denitrification by natural bacteria that convert NO_3 to N_2 gas.

To date, no adverse water quality impacts have been observed outside the treatment zone. The deep $Tnbs_1$ HSU beneath the T2 treatment zone remains devoid of VOCs based on ground water analytical results from $Tnbs_1$ guard well W-834-T1. Nearby Tpsg wells, W-834-T2B and W-834-T2C, located southwest of the treatment zone, remain "dry." Total VOC concentrations in Tpsg wells located upgradient (W-834-2117) and down gradient (W-834-2118) of the treatment zone, and in Tps-clay well (W-834-2119) located within the footprint of the treatment zone, did not significantly change during 2008. None of the wells located outside the treatment zone exhibited any significant changes in total VOC concentrations or any evidence of intrinsic bioremediation.

Monitoring will continue during 2009 to further evaluate the performance of this *in situ* technology. In addition to VOCs and metals, performance wells will be monitored for: (1) volatile fatty acids to ensure that adequate nutrients are available for bacterial dechlorination; (2) LHCs to confirm complete dechlorination of TCE to ethene; and (3) delta deuterium (H_2O) and delta oxygen-18 (H_2O) to estimate the proportion of injected H-H water to natural ground water in the treatment zone. Water quality impacts within the treatment zone and both laterally and vertically beyond the treatment zone will be monitored for significant increases in VOCs, salinity, metals (chromium, arsenic, manganese, selenium, and iron), and methane.

2.2.3.5. Building 834 OU Remedy Performance Issues

There were no new issues that affect the performance of the cleanup remedy for the Building 834 OU during this reporting period. Although the remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup in the Tpsg HSU, it has not had significant impact decreasing VOC concentrations in the underlying Tps clay HSU beneath the Core Area.

2.3. Pit 6 Landfill (Pit 6) OU 3

The Pit 6 Landfill covers an area of 2.6 acres near the southern boundary of Site 300. This landfill was used from 1964 to 1973 to bury waste in nine unlined debris trenches and animal pits. The buried waste, which includes laboratory equipment, craft shop debris, and biomedical waste is located on or adjacent to the Corral Hollow-Carnegie fault. Farther east, the fault trends to the south of two nearby water-supply wells CARNRW1 and CARNRW2. These active water-supply wells are located about 1,000 ft east of the Pit 6 Landfill. They provide water for the nearby Carnegie State Vehicular Recreation Area and are monitored on a monthly basis.

The Pit 6 Landfill was capped and closed in 1997 under CERCLA to prevent further leaching of contaminants resulting from percolation of rainwater through the buried waste. The engineered, multi-layer cap is intended to prevent rainwater infiltration into the landfill, mitigate potential damage by burrowing animals and vegetation, prevent potential hazards from the collapse of void spaces in the buried waste, and prevent the potential flux of VOC vapors through the soil. Surface water flow onto the landfill is minimized by a diversion channel on the north-side and drainage channels on the east, west, and south sides of the engineered cap. A map of Pit 6 Landfill OU showing the locations of monitoring and water-supply wells is presented in Figure 2.3-1.

2.3.1. Pit 6 Landfill OU Surface Water and Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.3-1. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring and post-closure requirements with the following exceptions; forty-six required analyses were not performed because there was insufficient water in the wells to collect the samples.

A ground water elevation contour map is presented in Figure 2.3-2.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

This section is organized into three subsections: analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

2.3.2.1. Pit 6 Landfill OU Analysis of Contaminant Distribution and Concentration

At the Pit 6 Landfill OU, VOCs and tritium are the primary COCs detected in ground water. Perchlorate and nitrate are secondary COCs. These constituents have been identified within the Qt-Tnbs$_1$ HSU. The distribution of total VOCs and tritium in the Qt-Tnbs$_1$ HSU based on data collected during the second semester (third quarter) 2008 are contoured on Figures 2.3-3 and 2.3-4, respectively. Isoconcentration contour maps for the secondary COCs, based on data collected during the first semester 2008, are presented on Figures 2.3-5 and 2.3-6.

2.3.2.1.1. Total VOC Contaminant Concentrations and Distribution

TCE and cis-1,2-DCE were detected within the Qt-Tnbs$_1$ HSU during the second semester of 2008. Total VOC concentrations during the second semester ranged from 10 μg/L (EP6-09, October 2008) to below the reporting limit (<0.5 μg/L).

TCE concentrations have decreased from the historic maximum of 250 μg/L (K6-19, 1988) to a maximum concentration of 10 μg/L during the second semester of 2008 (EP6-09, October 2008). During the second semester of 2008, cis-1,2-DCE was detected in samples from a single Pit 6 Landfill OU well at a maximum concentration of 2.4 μg/L (K6-01S, July 2008). The presence of cis-1,2-DCE, a degradation product of TCE, suggests that natural decomposition may be occurring. PCE was not detected during the second semester of 2008.

VOCs were not detected in samples collected during the second semester from guard wells W-PIT6-1819, K6-17, K6-22, and K6-34.

2.3.2.1.2. Tritium Contaminant Concentrations and Distribution

Tritium was detected above the 100 pCi/L background activity in samples from several wells completed in the Qt-$Tnbs_1$ HSU both north of the fault and within the fault zone. The maximum second semester 2008 tritium activity in ground water was 316 pCi/L (K6-18, August 2008). No tritium activities exceeded the State Public Health Goal (PHG) (400 pCi/L) or the cleanup standard (20,000 pCi/L).

Historically, the highest tritium activities in ground water in the Pit 6 Landfill OU were measured at K6-36 (3,420 pCi/L in 2003). K6-36 has been dry since October 2006. However, because the Qt-$Tnbs_1$ HSU is likely saturated below the well screen, the August 2006 tritium activity of 1,200 pCi/L was used to conservatively create the isoconcentration contours presented on Figure 2.3-4, and thus the 1,000 pCi/L contour is shown. Similarly, during third quarter 2008, well K6-24 was dry with the Qt-$Tnbs_1$ HSU likely saturated below the well screen; the most recent tritium activity (407 pCi/L, January 2008) was used for contouring and thus the 400 pCi/L contour is shown.

Tritium was detected in ground water from well W-PIT6-1819 during 2008, except for the fourth quarter sample. This well is used to define the downgradient extent of the tritium plume. It is located approximately 100 ft west of the Site 300 boundary with the Carnegie State Vehicle Recreation Area residence area and about approximately 200 ft west of the CARNRW1 and CARNRW2 water-supply wells (Figure 2.3-4). The January, April, August, and December 2008 samples from well W-PIT6-1819 yielded tritium activities of 127 pCi/L, 146 pCi/L, 161 pCi/L, and <100 pCi/L, respectively. However, due to a decline from recent sample analyses and suspected sample container mislabeling, the fourth quarter result for W-PIT6-1819 has been flagged as suspect. Similarly, during fourth quarter, tritium was detected in the sample from $Tnbs_1$ guard well K6-34 (255 pCi/L, December 2008) for the first time, and this result was also flagged as suspect. The identifying labels on sample containers for wells K6-34 and W-PIT6-1819 appear to be incorrect; the container for K6-34 was likely mislabeled "W-PIT6-1819" and the container for W-PIT6-1819 was likely mislabeled "K6-34".

Tritium activities were below 100 pCi/L in all the monthly samples (except the April 2008 sample) obtained from the four off-site CARNRW wells during the 2008. Tritium was detected in samples from wells CARNRW1, CARNRW2, and CARNRW4 collected in April 2008 at activities of 111 pCi/L, 134 pCi/L, and 113 pCi/L, respectively. However, the duplicate April 2008 samples collected from these wells contained tritium below the detection limit and thus, the detections reported in the April samples were likely spurious. Based on these analyses and the results from other wells, the extent of the tritium plume appears to be declining.

2.3.2.1.3. Perchlorate Contaminant Concentrations and Distribution

During 2008, perchlorate was detected above the 4 µg/L reporting limit in only one Pit 6 Landfill OU sample. A January 2008 sample from well K6-18 (completed in the Qt-$Tnbs_1$ HSU within the fault zone) contained 5.5 µg/L of perchlorate. This concentration is below the 6 µg/L cleanup standard. However, a duplicate sample collected from this well on the same date did not contain perchlorate above the 4 µg/L reporting limit. Perchlorate was not detected in the samples collected from any of the other monitor wells or CARNRW water supply wells during 2008. Perchlorate concentrations in ground water have been steadily decreasing from their historic maximum concentration of 65.2 µg/L in a sample collected from well K6-19 in 1998.

In the 2007 Annual CMR, we reported the maximum 2007 concentration of perchlorate was detected in a ground water sample from well K6-18 (completed in the Qt-$Tnbs_1$ HSU within the fault zone) at 6.6 mg/L (February 2007). A duplicate sample collected from the well at the same time did not contain perchlorate above the 4 mg/L reporting limit. The reported concentration and reporting limit (units of measurement) were incorrect. The maximum concentration was actually 6.6 µg/L not *mg*/L, and the reporting limit was 4 µg/L, not 4 *mg*/L.

2.3.2.1.4. Nitrate Contaminant Concentrations and Distribution

During 2008, nitrate was detected in samples collected from wells completed within the Qt-$Tnbs_1$ HSU within and north of the fault zone. Nitrate was only detected in ground water above the 45 mg/L cleanup standard in samples from well K6-23 (160 mg/L in January 2008 and 210 mg/L in November 2008). Well K6-23 consistently yields ground water nitrate concentrations in excess of the cleanup standard and is located in close proximity to the Building 899 septic system, which may be a potential source of the nitrate at this location. The elevated nitrate appears to be localized near this building.

Nitrate was not detected above 0.5 mg/L reporting limit in any of the monthly samples collected during 2008 from water-supply well CARNRW1.

2.3.2.2. Pit 6 Landfill OU Remediation Optimization Evaluation

The remedy for tritium and VOCs in ground water at the Pit 6 Landfill is Monitored Natural Attenuation (MNA). Ground water elevations and contaminants are monitored on a regular basis to: (1) evaluate the efficacy of the natural attenuation remedy in reducing contaminant concentrations, and (2) detect any new chemical releases from the landfill. In general, all primary and secondary ground water COCs at the Pit 6 Landfill OU exhibit stable to decreasing trends and ground water elevations beneath the landfill remain well below the buried waste. In fact, ground water levels in the Qt-Tnbs1 HSU north of the fault dropped below the screened portion of many of the monitor wells in this area. Consequently, many of the samples that were scheduled for 2008 could not be collected. This decline in water levels is due to a combination of lower than average rainfall and continued pumping from CARNRW1 And CARNRW2.

There has been a steep decline in perchlorate concentrations in Pit 6 area ground water from a maximum of 65.2 µg/L in 1998 to below the 6 µg/L cleanup standard in samples from well K6-19. Perchlorate was only detected in ground water above the reporting limit (4 µg/L) in a sample from one Pit 6 well. Tritium activities in ground water continue to decrease toward background levels and remain far below the 20,000 pCi/L cleanup standard; tritium activities did not exceed the 400 pCi/L PHG. Maximum TCE concentrations in ground water remain above the 5 µg/L cleanup standard in samples from only one well (EP6-09) and the concentrations and extent of total VOCs in ground water are generally declining.

2.3.2.3. Pit 6 Landfill OU Performance Issues

Declining water levels north of the fault have impacted the monitoring component of the cleanup remedy for the Pit 6 Landfill OU during this reporting period. Despite these conditions, all scheduled samples were collected from guard well W-PIT6-1819 and the two water supply wells CARNRW1 and CARNRW2. Based on these results, the remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.4. High Explosives Process Area (HEPA) OU 4

The HEPA has been used since the 1950s for the chemical formulation, mechanical pressing, and machining of high explosives (HE) compounds into shaped detonation charges. Surface spills from 1958 to 1986 resulted in the release of contaminants at the former Building 815 steam plant. Subsurface contamination is also attributed to HE waste water discharges into former unlined rinse water lagoons. Another minor source of contamination in ground water resulted from leaking contaminated waste stored at the former Building 829 Waste Accumulation Area located near Building 829.

Six GWTSs operate in the HEPA: Building 815-Source (815-SRC), Building 815-Proximal (815-PRX), Building 815-Distal Site Boundary (815-DSB), Building 817-Source (817-SRC), Building 817-Proximal (817-PRX), and Building 829-Source (829-SRC). A map of the HEPA OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.4-1.

The 815-SRC GWTS began operation in September 2000 removing TCE, RDX, and perchlorate from ground water. Initially, the system extracted from one extraction well, W-815-02 and consisted of aqueous-phase GAC, an ion-exchange system, and an anaerobic bioreactor for nitrate destruction. The treated effluent was discharged to a misting system. The anaerobic bioreactor was decommissioned in 2003. In 2005, the wellfield was expanded to include extraction well, W-815-04 with a current combined flow rate of approximately 1.4 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, three aqueous-phase GAC canisters connected in series for TCE and RDX removal, and two ion-exchange columns containing SR-7 resin (also connected in series) for perchlorate removal. In 2005, the discharge method of misting was replaced by injection of the treated effluent into well W-815-1918 for *in situ* denitrification in the $Tnbs_2$ HSU.

The 815-PRX GWTS began operation in October 2002 removing TCE and perchlorate from ground water. Ground water is extracted from wells W-818-08 and W-818-09 at a current combined flow rate of approximately 1.6 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange columns with SR-7 resin that are connected in series for perchlorate removal, and three aqueous-phase GAC (also connected in series) for TCE removal. In 2005, the discharge method of misting was replaced by injection of the treated effluent into well W-815-2134 where an *in situ* natural denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 815-DSB GWTS began operation in September 1999 removing low concentrations (less than 10 μg/L) of TCE from ground water extracted near the Site 300 boundary. Ground water is currently extracted from wells W-35C-04 and W-6ER at a combined flow rate of approximately 3 to 4 gpm. The GWTS originally operated intermittently on solar-power until site power was installed in 2005 when 24-hour operations began. The treated effluent is discharged to an infiltration trench.

The 817-SRC GWTS began operation in September 2003 removing RDX and perchlorate from ground water. Well W-817-01 extracts ground water from a very low yield portion of the $Tnbs_2$ aquifer. It pumps ground water intermittently using solar power at flow rates ranging from 300 to 900 gallons per month. The current GWTS configuration includes two ion-exchange columns with SR-7 resin that are connected in series for perchlorate removal, a Cuno filter to remove particulates, and three aqueous-phase GAC (also connected in series) for RDX removal.

Treated ground water is injected into upgradient injection well W-817-06A where an *in situ* natural denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 817-PRX GWTS began operation in September 2005 removing VOCs, RDX, and perchlorate from ground water. Initially, ground water was extracted from wells W-817-03 and W-817-04 at a combined flow rate of approximately 1.0 gpm, although the vast majority of ground water was extracted from W-817-03. In 2007, the extraction wellfield was expanded to include extraction well, W-817-2318. Due to the low yield from ground water extraction well W-817-04, extraction from this well was discontinued in December 2007. Ground water is currently extracted at a combined flow rate of approximately 1.5 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two aqueous-phase GAC canisters connected in series for TCE and RDX removal, two ion-exchange columns containing SR-7 resin (also connected in series) for perchlorate removal, and a third aqueous-phase GAC canister completes the treatment chain. Treated ground water containing nitrate is injected into upgradient injection well W-817-2109 and W-817-02 that was added in 2007. The treated effluent is split between the two injection wells where an *in situ* denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 829-SRC GWTS began operation in August 2005 removing VOCs, nitrate, and perchlorate from ground water. Solar power is used to extract ground water from well W-829-06 at a flow rate of approximately 1 to 4 gallons a day. The current GWTS configuration includes two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, three aqueous phase GAC canisters (also connected in series) for VOC removal, and a biotreatment unit to treat nitrate. However, the biotreatment unit has not been utilized because all the nitrate has to date been adsorbed by the SR-7 resin. Treated effluent is injected into upgradient well W-829-08.

2.4.1. HEPA OU Ground Water Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modifications.

2.4.1.1. HEPA OU Facility Performance Assessment

The monthly ground water discharge volumes, extraction flow rates, and operational hours are summarized in Tables 2.4-1 through 2.4-6. The total volume of ground water extracted and treated and the total contaminant mass removed during this reporting period is presented in Table Summ-1. The total volume of ground water treated and discharged and the total contaminant mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are presented in Tables 2.4-7 through 2.4-9. The pH measurement results are presented in Appendix A.

2.4.1.2. HEPA OU Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the 815-SRC, 815-PRX, 815-DSB, 817-SRC, 817-PRX, and 829-SRC GWTSs during second semester:

815-SRC GWTS

- Ion exchange resin at the 815-SRC was replaced on August 7 following breakthrough after the first resin column.
- GWTS offline from August 7 until August 11 due to high-pressure interlock shutdown.
- GWTS was shut down from August 18 to August 19 to replace a cracked line on the Cuno filter.

815-PRX GWTS

- 815-PRX was shut down from July 16th to July 17 to repair a leaking GAC canister. A GAC change-out was conducted at this time.
- Ion-exchange resin was replaced on September 8.
- The GWTS was shut down on December 10 for the rest of the reporting period to prevent damage caused by freezing temperatures.

815-DSB GWTS

- 815-DSB was offline due to software related issues until July 9 when both extraction wells, W35C-04 and W-6ER, were restarted.
- Extraction well W-6ER was shut down from July 23 to July 29 to replace the pump.
- The GWTS was shutdown from December 3rd to the 4th to install water level transducers in the extraction wells.
- The GWTS was shut down on December 17 because extraction well W-35C-04 was not operating due to software problems. New software was downloaded and the system was restarted on December 23.

817-SRC GWTS

- 817-SRC was shut down on July 17 for reprogramming and transducer replacement. The system was restarted on July 22.
- The GWTS is only operating approximately 4 hours/week due to low ground water levels.
- The GWTS was shut down on December 10 for the rest of the reporting period to prevent damage caused by freezing temperatures.

817-PRX GWTS

- 817-PRX was shut down on August 14 for an injection well rebound test. The system was restarted on August 18 temporarily before being shut down for another injection well rebound test. The GWTS operated intermittently during September while the injection well rebound test was conducted on reinjection wells W-817-02 and W-817-2318.
- Ion-exchange resin was replaced on October 25.
- The GWTS was shut down temporarily on November 18 to address data collection issues. The GWTS was found to be off line on November 19 and remained shut down for nearly the remainder of the reporting period while system software problems are resolved. The system was started up temporarily December 8 to obtain compliance samples.

829-SRC GWTS

- Compressor issues caused the GWTS to run intermittently during the reporting period. 829-SRC was offline on the following days:
  - July 30 to July 31.
  - August 4 to August 14.
  - August 21 to August 28.
  - September 3 to October 7.
  - October 15 and remained offline for the rest of the reporting period.

2.4.1.3. HEPA OU Compliance Summary

The 815-SRC, 815-PRX, 815-DSB, 817-SRC, 817-PRX, and 829-SRC GWTSs operated in compliance with the Substantive Requirements for Wastewater Discharge.

2.4.1.4. HEPA OU Facility Sampling Plan Evaluation and Modifications

The HEPA OU facility sampling and analysis plan complies with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.4-10.

2.4.1.5. HEPA OU Treatment Facility and Extraction Wellfield Modifications

The only modification within the HEPA OU was the addition of a third resin column for perchlorate removal at 817-PRX GWTS. This additional column contains a new type of perchlorate specific resin, and was put in the primary position to test the efficiency of the resin. The perchlorate resin that has historically been used (SR-7) is no longer being manufactured in the United States, necessitating the testing of the new resin. No other treatment facility or extraction wellfield modifications were made during this reporting period.

2.4.2. HEPA OU Ground Water and Surface Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.4-11. This table also explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; twenty-six required analyses were not performed because there was insufficient water in the wells to collect the samples.

Ground water elevation data are contoured for the $Tnbs_2$ HSU and are posted for the Tpsg and $Tnsc_{1b}$ (Building 829 area) HSUs as presented in Figures 2.4-2, 2.4-4 and 2.4-6. The ground water elevations contour maps also show hydraulic capture zones associated with active extraction wells and areas of hydraulic influence resulting from the injection of treated effluent into injection wells.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.4.3. HEPA OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; contaminant concentrations and distribution; remediation optimization evaluation; and performance issues.

2.4.3.1. HEPA OU Mass Removal

The monthly ground water mass removal estimates are summarized in Tables 2.4-12 through 2.4-17. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

2.4.3.2. HEPA OU Contaminant Concentrations and Distribution

At the HEPA OU, VOCs (mainly TCE) are the primary COCs detected in ground water; RDX, HMX, 4-amino-2,6-dinitrotoluene (4-ADNT), perchlorate, and nitrate are secondary COCs. Most ground water contamination at the HEPA is present in the $Tnbs_2$ HSU. Minor amounts of VOCs, perchlorate, and nitrate contamination are present in perched ground water in the $Tnsc_{1b}$ HSU beneath the Waste Accumulation Area, located in the northwest portion of the HE Process Area. Some TCE, RDX, and perchlorate have been detected in ground water in the Tpsg sands and gravels of the Tpsg-Tps HSU in the vicinity of Building 815. No contamination has been detected in the Tps portion of the Tpsg-Tps HSU, or the upper and lower $Tnbs_1$ HSUs in the HEPA OU.

Total VOC concentration data are contoured for $Tnbs_2$ and posted for Tpsg and $Tnsc_{1b}$ based on data collected during the second semester 2008 and are presented on Figures 2.4-3, 2.4-8, and 2.4-12. Isoconcentration contour maps for the secondary COCs based on data collected during the first semester 2008 are presented in (1) Figures 2.4-4 through 2.4-6 for the Tpsg HSU, (2) Figures 2.4-9 through 2.4-11 for the $Tnbs_2$ HSU, and (3) Figure 2.4-12 for the $Tnsc_{1b}$ HSU in the Building 829 former burn pit area. For collocated wells, the highest concentration was used for contouring.

2.4.3.2.1. Total VOC Contaminant Concentrations and Distribution

During the second semester 2008, the maximum total VOC concentration measured in samples from $Tnbs_2$ wells was 45 µg/L measured in both well W-818-11 (February 2008) located upgradient of the 815-PRX treatment facility and downgradient of the 815-SRC treatment facility and well W-818-08 (July 2008), an 815-PRX treatment facility extraction well. The $Tnbs_2$ total VOC plume is detached from its source at Building 815 and the 815-PRX extraction wellfield captures the highest concentrations in this plume. The VOC concentrations in ground water in the $Tnbs_2$ HSU in the HEPA have decreased from a maximum historic concentration of 110 µg/L (W-818-08, May 1992). The plume has much the same shape and extent as in previous years. VOCs continue to be detected in ground water from well W-830-2216 located at the end of Building 832 Canyon. This contamination likely comes from Building 832 Canyon OU sources. This well was connected as an extraction well to 830-DISS in June 2007.

During the second semester 2008, trace VOC concentrations were detected above the 0.5 µg/L reporting limit in samples from $Tnbs_2$ guard wells W-815-2110 and W-815-2111, located near the site boundary. VOCs were not detected in samples taken from any of the other onsite or offsite HEPA $Tnbs_2$ guard wells. However, VOCs were detected at 0.51 µg/L in one of sixteen samples collected from offsite water-supply well, GALLO1 during 2008, resulting in an increase in the lateral extent of the plume to the southwest. The 817-PRX and 815-DSB facilities were installed to prevent extended migration of VOCs near the site boundary. Continuous operation of the 815-DSB facility appears to be mitigating extended migration of VOCs downgradient of this facility and offsite.

In the second semester 2008, total VOCs were detected in samples from 829-SRC ($Tnsc_{1b}$) extraction well W-829-06 (17 µg/L in July 2008). VOCs have never been detected in ground water from nearby monitoring well W-829-1940. Total VOC concentrations in ground water from well W-829-06 have decreased significantly from a historic maximum of 1,013 µg/L (August 1993).

VOCs, mainly TCE, have been detected in the Tpsg sands and gravels of the Tpsg-Tps HSU in the vicinity of Building 815. For the most part, total VOC concentrations in this HSU have been decreasing over time. In addition, the limited recharge to this zone has resulted in declining water levels resulting in insufficient water for sampling. The maximum second semester 2008 VOC concentration detected in samples from Tpsg-Tps wells was 37 µg/L in recently installed 817-PRX extraction well W-817-2318 (July 2008). VOCs in the Tpsg-Tps well W-35C-05, located near the site boundary, remain below the 0.5 µg/L reporting limit.

During the second semester 2008, total VOCs were detected in samples from Qal/WBR guard well W-880-02 (0.52 µg/L, July 2008). Ground water from well W-880-02 and well W-4AS have historically and intermittently had trace concentrations of total VOCs. Trace total VOC contamination in these wells is likely from Building 832 Canyon sources. Total VOC concentrations in ground water from Qal/WBR wells W-35C-06 and W-6ES, located near the site boundary, remain below the 0.5 µg/L reporting limit.

2.4.3.2.2. HE Compound Contaminant Concentrations and Distribution

During 2008, RDX concentrations detected in samples from $Tnbs_2$ wells ranged from <1 µg/L to a maximum of 99 µg/L in well W-809-03 (January 2008). Overall, RDX concentrations in the $Tnbs_2$ HSU have decreased from a historic maximum of 204 µg/L in 817-SRC extraction well W-817-01 (July 1992) to a maximum concentration of 48 µg/L in 2008. RDX concentrations decrease rapidly in the downgradient direction to below the 1 µg/L reporting limit just upgradient (i.e., northwest) of 815-PRX extraction well W-818-08. Although the maximum RDX concentration continues to decrease, the extent of RDX contamination in the $Tnbs_2$ HSU remains essentially the same as documented in previous reports. The southeastern front of the RDX plume north-west of 815-PRX treatment facility extraction wells has remained relatively stable. Small decreases in the southwestern portion of the RDX plume extent are observed and are likely due to the 817-PRX treatment facility injection-extraction loop. Conversely, ground water concentrations continue to increase in the vicinity of 815-SRC treatment facility injection well W-815-1918 in the northern extent of the RDX plume. This may be due to mobilization of RDX in the capillary fringe by injection of treated ground water into nearby 815-SRC injection well W-815-1918.

RDX was not detected in any of the $Tnbs_2$ guard wells in 2008 or in any of the $Tnsc_{1b}$ wells, in first semester 2008. RDX was detected for the first time in ground water from the Tpsg HSU in well W-815-1928 at a concentration of 19 µg/L. Historic RDX concentrations in ground water from this well and all Tpsg wells have been <1 µg/L. However, well W-815-1928 is screened in a perched water zone of the Tpsg HSU; thus, the screened interval is only periodically saturated. Ground water from this well has only been sampled and analyzed for

RDX once (<1 µg/L, March 2003); between 2003 and the most recent sampling event, well W-815-1928 has been dry during scheduled sampling events.

Generally, HMX detections in the $Tnbs_2$ HSU are rare but have occurred in the 817-SRC extraction well W-817-01. During 2008, a maximum HMX concentration of 110 µg/L was detected in ground water from well W-817-01 (July). This concentration is so far above recent concentrations trends for well W-817-01 (19 µg/L, April 2008 and 18 µg/L, October 2008) that it is considered suspect, and possible of a laboratory error is being investigated. Historically, the highest reported HMX concentration of 57 µg/L was detected in ground water from the 817-SRC extraction well, in October 1995.

Additionally, nitrobenzene was detected in a sample from the 817-SRC extraction well at a concentration of 6.2 µg/L, and in one sample from the influent to the 815-SRC GWTS at 4.1 µg/L. These are the only nitrobenzene detections above the reporting limit of 2 µg/L during the reporting period as well as the first time nitrobenzene has been detected in ground water in the HEPA.

During the second semester 2008, no 4-amino-2,6-dinitrotoluene (4-ADNT) was detected above the reporting limit of 2 µg/L in any monitor well sample. However, 4-ADNT was detected at a concentration of 7.5 µg/L in a sample collected from the influent to the 815-SRC GWTS in July. The historic high concentration of 4-ADNT of 24 µg/L was measured in September 1997. These detections of HE compounds other than HMX and RDX are due to a recent change in the Site 300 sampling plan to report all HE compounds detected using EPA method 8330.

2.4.3.2.3. Perchlorate Contaminant Concentrations and Distribution

Perchlorate concentrations in the $Tnbs_2$ HSU have decreased from a historic maximum of 50 µg/L (February 1998) in well W-817-01 to a maximum of 29 µg/L (June 2008) in this well. Perchlorate was not detected in any of the $Tnbs_2$ guard wells in 2008. Maximum concentrations of the perchlorate plume are decreasing and the southwestern plume front is receding; both results are likely due to operations of treatment facilities 817-PRX and 817-SRC. The north extent of the plume is increasing due to continuous concentration increases observed in W-809-03. This may be due to mobilization of perchlorate in the capillary fringe by injection of treated ground water into nearby 815-SRC injection well W-815-1918. Perchlorate was detected in samples taken from $Tnsc_{1b}$ extraction well W-829-06 at concentrations of 9.6 µg/L (January 2008) and 9.5 µg/L (June 2008). Concentrations have decreased from a historic maximum of 29 µg/L (December 2000) in well W-829-06.

The 2008 maximum perchlorate concentration detected in samples from Tpsg wells was 17 µg/L in 817-PRX extraction well W-817-2318 (January 2008). Perchlorate was not detected in any Qal/WBR wells during the reporting period.

2.4.3.2.4. Nitrate Contaminant Concentrations and Distribution

During 2008, nitrate concentrations in samples from the $Tnbs_2$ HSU ranged from <0.1 mg/L in the vicinity of the Site 300 boundary to a maximum of 100 mg/L (January 2008, W-815-04). Nitrate was not detected above the 45 mg/L cleanup standard in ground water from any of the $Tnbs_2$ guard wells sampled during this reporting period.

The maximum nitrate concentration detected in a sample during 2008 from the $Tnsc_{1b}$ HSU was 82 mg/L in extraction well W-829-06 (January 2008).

The 2008 maximum nitrate concentration was detected in ground water from Tpsg-Tps HSU well W-6CS at 610 mg/L (January 2008). Because there are no known septic systems or other Site 300 operations-related nitrate sources near this well, the elevated nitrate may be attributable to a pre-Site 300 sheep ranch that was discovered on a historic photo of the area. Ground water sampled from all other nearby wells screened in this HSU has significantly lower nitrate concentrations by one to two orders-of-magnitude. Ground water sampled from all Qal/WBR wells has nitrate concentrations below the 45 mg/L cleanup standard.

The nitrate concentrations detected in ground water during the first semester of 2008 continue to support the interpretation that nitrate is being treated *in situ* by natural processes. Nitrate concentrations decrease significantly due to microbial denitrification near the Site 300 boundary where the $Tnbs_2$ is anoxic and under confined conditions. Nitrate concentrations are significantly lower than the 45 mg/L cleanup standard in all wells near the site boundary.

2.4.3.3. HEPA OU Remediation Optimization Evaluation

The key to remediation optimization at the HEPA OU is to manage extraction wellfield flow rates to balance the influence of site boundary pumping with upgradient pumping in the Source Area. Based on the $Tnbs_2$ ground water elevation map and the total VOC isoconcentration map shown on Figures 2.4-2 and 2.4-3, the existing extraction wellfield captures the highest concentrations in the VOC plume in the vicinity of wells W-818-08 and W-818-09 (815-PRX) and captures the leading edge of the plume near the site boundary (815-DSB). Some lateral migration of the VOC plume appears to be occurring downgradient of 817-PRX and between 815-DSB and GALLO1. A study is underway to determine the most effective way to offset the possible effects of the pumping of the GALLO1 well that may be pulling TCE towards the well . Additionally, in first semester 2008, flow rates from 815-PRX ground water extraction wells W-818-08 and W-818-09 were increased to expand capture of the high concentration portions of the VOC plume.

Although the overall extent of the primary and secondary COC plumes in the HEPA has not changed significantly, total VOC and RDX concentrations within the plumes continue to decline from their historic maximums. These trends are due to a combination of natural attenuation mechanisms and remediation efforts in the Source and Proximal areas of this OU. RDX concentrations continue to exhibit decreasing trends since monitoring for this COC began in 1985. The 815-SRC extraction wells, W-815-02 and W-815-04, have the highest RDX concentrations and increased pumping from these wells should improve RDX remediation in the Building 815 Source Area. Perchlorate concentrations in the $Tnbs_2$ HSU have steadily decreased since 1998 when monitoring for this COC began. The 817-SRC (W-817-01) and 817-PRX (W-817-03 and W-817-04) extraction wells have the highest perchlorate concentrations in this OU. Extraction from well W-817-04 was terminated due to very low yield and pumping from well W-817-03 was increased in early first semester of 2008. The increased extraction flow rate from well W-817-03 was discontinued in February 2008, due to limited injection well flow control and capacity. Upgrades to the 817-PRX injection well manifold control system should allow for increased ground water extraction flow rates from well W-817-03 in 2009. The maximum perchlorate concentration should begin to decline in response to increased pumping in well W-817-03 beginning in early 2008. Additionally, upgradient injection at 815-SRC, 817-SRC, 815-PRX, and 817-PRX will continue to enhance remediation by flushing contaminants toward the extraction wells. However, increasing RDX and perchlorate concentrations in well W-809-03 continue to increase the extent of the HE compound plumes upgradient of the 815-SRC extraction wellfield.

Continued full-time operation of the 815-DSB facility, continued increased pumping from 815-DSB extraction wells and well W-818-08, and increased pumping from well W-817-03 in 2009 coupled with the increase in effluent injection control at 817-PRX, should improve long-term ground water yield and mass removal at this OU and further prevent contaminated ground water from reaching the Site 300 boundary. Close monitoring of VOC concentrations in the site boundary area will continue, especially in the vicinity of well GALLO1.

2.4.3.4. HEPA OU Remedy Performance Issues

There were no new issues that affect the performance of the cleanup remedy for the HEPA OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.5. Building 850 OU 5

High explosives experiments have been conducted at the Building 850 Firing Table. Until 1989, gravels on the firing table surface were disposed of in several disposal pits in the northern portion of the site. In the past, infiltrating water mobilized chemicals from contaminated gravel and debris to underlying soil, bedrock, and ground water. However, since the practice of watering down the firing table following explosives tests was discontinued, the firing table no longer releases significant contamination to the subsurface. A map of the Building 850 OU showing the locations of monitoring wells is presented in Figure 2.5-1.

2.5.1. Building 850 OU Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.5-1. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; twenty-four required analyses were not performed because there was insufficient water in the wells to collect the samples, four required analyses were not performed because a bent casing prevented sample collection, five required analyses were not performed because there was no pump in the well, eight required analyses were not performed because the samples were inadvertently not collected, and eight required analyses were not performed because of insufficient sampling personnel during the second quarter.

During 2008, uranium analyses were performed by inductively coupled plasma-mass spectrometry (ICP-MS) using two different methods: (1) EPA Method 6020 utilized by a contract laboratory and (2) an LLNL developed state-of-the-art isotope dilution method that provides precise ^{235}U and ^{238}U measurements. EPA Method 6020 is not designed to ensure precise measurement of individual isotopes to attain a $^{235}U/^{238}U$ isotope ratio with the small errors necessary to meet data quality objectives for uranium isotope ratio determination. The majority of ground water samples collected in 2008 were analyzed using EPA Method 6020.

Therefore, uranium isotope ratio data are not included in the uranium mass spectrometry data table (Table B-5.5) or the Building 850 area ground water uranium activity maps (Figures 2.5-6 and 2.5-7).

Ground water elevation contour maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU are presented in Figures 2.5-2 and 2.5-3, respectively.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.5.2. Building 850 OU Remediation Progress Analysis

This section is organized into three subsections: analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

2.5.2.1. Building 850 OU Contaminant Concentrations and Distribution

At the Building 850 OU, tritium is the primary COC detected in ground water; depleted uranium, perchlorate, and nitrate are secondary COCs. These constituents have been identified within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs. The distribution of tritium in each HSU, based on data collected during the second semester 2008 is contoured on Figures 2.5-4 and 2.5-5. Secondary COCs and perchlorate concentrations, based on data collected during the first semester 2008, are presented on Figures 2.5-6 through 2.5-11.

2.5.2.1.1. Tritium Contaminant Concentrations and Distribution

The maximum 2008 tritium activity in ground water within the OU5 Subarea including Pit 7, was 56,100 ± 5,600 pCi/L (May 2008) from well NC7-70, screened in the Qal/WBR and upper part of the $Tnbs_1/Tnbs_0$ bedrock HSU and located about 50 ft downgradient (east) of the Building 850 Firing Table. The highest tritium activities in ground water in the Building 850 area continue to be located immediately downgradient of the Building 850 Firing Table. The historic maximum of 566,000 pCi/L measured in 1985 in a sample from well NC7-28, has declined to 26,600 ± 2700 pCi/L in 2008. The extent of the 20,000 pCi/L cleanup standard ground water tritium activity contour in both the Qal/WBR and $Tnbs_1/Tnbs_0$ bedrock HSUs in Doall Ravine is similar to that of 2007. However, a sample from recently installed Qal/WBR HSU well W-850-2313 contained tritium at higher activities (20,000 pCi/L) than nearby Qal/WBR HSU monitor wells. This well is located near the intersection of Doall Road and Route 4 and was installed to replace damaged well NC7-45.

Ground water tritium activities in most portions of the Building 850 plume continue to decline. While the extent of tritium in ground water with activities above the 400 pCi/L State PHG remains stable, since 2007 the extent of tritium at background levels (100 pCi/L) has declined northeast of Pit 1.

2.5.2.1.2. Uranium Contaminant Concentrations and Distribution

Total uranium activities in ground water continue to be below the 20 pCi/L cleanup standard in samples from all wells in the Building 850 OU with the exception of two samples collected from wells NC7-28 (21 pCi/L, February 2008) and NC7-29 (22 pCi/L, April 2008). Well NC7-28, screened across the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, is located immediately downgradient of the Building 850 Firing Table; Well NC7-29, screened in the $Tnbs_1/Tnbs_0$ HSU is located on Route 4, south of Doall Road. Historic uranium isotope data from well NC7-28 indicate that ground samples from the well contain added depleted uranium. Subsequent samples collected from well NC7-28 in April, July, and October 2008 yielded uranium activities below the 20 pCi/L cleanup standard.. The historic data for NC7-29 also exhibit a slightly increasing trend however, this uranium is natural based on historic isotope ratio data.

Historic data indicate that the distribution of ground water within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs containing some added depleted uranium extends downgradient about 1,200 ft and 700 ft, respectively, from the Building 850 Firing Table and has remained relatively stable. Due to the uranium data quality issue discussed above in Section 2.5.1, the extent of depleted uranium in the two HSUs is not presented in this report. In 2009, uranium isotope data from selected wells collected at that time that meet the data quality objectives will be available to depict the extent of depleted uranium in ground water.

2.5.2.1.3. Nitrate Contaminant Concentrations and Distribution

Nitrate above the 45 mg/L cleanup standard was detected in samples from fourteen Building 850 area wells in 2008. The wells are located downgradient and east of Building 850, south-southeast of Building 850, east of Pit 1, southeast of Pits 1 and 2, and east of Building 801. The maximum 2008 nitrate concentration detected in ground water was 160 mg/L (NC7-29, April 2008). The historic maximum nitrate concentration was 180 mg/L (NC7-29, 2007). Historic data indicate that ground water nitrate concentrations in the two HSUs are limited in extent and relatively stable. Overall, the distribution and concentrations of nitrate in ground water are generally similar to those observed in previous years.

2.5.2.1.4. Perchlorate Contaminant Concentrations and Distribution

During 2008, perchlorate at concentrations exceeding the 6 µg/L cleanup standard was detected in samples from wells east and south of Building 850, in Doall Ravine, in Elk Ravine, and east of Pit 1. The maximum perchlorate concentration of 92 µg/L was detected in well NC7-28 located downgradient of the Building 850 Firing Table in October 2008. This and nearby well W-850-2417 continue to exhibit the highest perchlorate concentrations in the Building 850 area.

In 2008, perchlorate was detected in two of ten wells (K1-02B [7.3 µg/L] and W-PIT1-2326 [6.1 µg /L]) located downgradient of Pit 1 at concentrations exceeding the 6 µg/L Maximum Contaminant Level (MCL). Perchlorate was also detected in two additional wells (K1-06 and W-PIT1-02) at concentrations above the 4 µg/L reporting limit, but below the 6 µg/L MCL. However, perchlorate in the most recent 2008 samples from all four wells had decreased to concentrations slightly above the 4 µg/L reporting limit. Perchlorate concentrations in all wells downgradient of Pit 1 have decreased from a historical maximum concentration of 9.6 µg/L to a recent (2008) maximum of 5.4 µ g/L. Ground water downgradient of Pit 1 is monitored to evaluate the extent of the contaminant plumes emanating from the Building 850 as part of the CERCLA cleanup program. Detection monitoring for potential releases from the Pit 1 Landfill is conducted under a Waste Discharge Requirement issued by the RWQCB, as this landfill is not part of the CERCLA program at Site 300. Detection monitoring results for the Pit 1 Landfill are reported in the quarterly Compliance Monitoring Program reports for the RCRA-closed Pit 1 Landfill. .

Although the magnitude of perchlorate in the Building 850 Firing Table area increased during 2008, the overall extent of perchlorate in ground water has not changed significantly.

Perchlorate concentrations in the Building 850 Source Area and the vicinity of Pits 1 and 2 will continue to be closely monitored.

In the 2007 Annual CMR, we reported the historic maximum perchlorate concentration in Building 850 OU was 75.2 mg/L (NC7-28, May 2005). This concentration (unit of measurement) was incorrect. The historic maximum perchlorate concentration in Building 850 OU, as of the release date of the 2007 Annual CMR, was actually 75.2 µg/L not 75.2 *mg*/L.

2.5.2.1.5. HE Compound Contaminant Concentrations and Distribution

During 2008, ground water samples were collected from eight selected Building 850 Source Area wells and analyzed for the HE compounds HMX and RDX at a 1 µg/L reporting limit. The HE data indicate that the cleanup standard for RDX (1 µg/L) was exceeded in samples from three of the eight wells, while all HMX results were significantly below the Regional Tapwater Screening Level for HMX (1,800 µg/L). The RDX concentrations ranged up to 5.9 µg/L and the maximum RDX concentration was detected in a sample from W-850-2417, which is located immediately east of the Building 850 firing table. Based on 2008 data, RDX exceeding the cleanup standard extends about 400 feet east of Building 850. Additional samples scheduled for 2009 will be used to define the full extent of HE compounds in the ground water downgradient of Building 850. Future samples from these wells will be used to evaluate trends and determine whether or not an active HE source exists in the vadose zone beneath the firing table.

2.5.2.2. Building 850 OU Remediation Optimization Evaluation

MNA is the selected remedy for remediation of tritium in ground water emanating from the Building 850 area. Recent data indicate MNA continues to be effective in reducing tritium activities in ground water. The highest tritium activities in ground water continue to be located immediately downgradient of the tritium sources at the Building 850 Firing Table and continue to decline. The extent of the 20,000 pCi/L tritium activity contours in both HSUs continues to diminish. The significant decreases in activities and extent of the Building 850 tritium plume with activities exceeding the cleanup standard indicate that natural attenuation (dispersion, radioactive decay and a decreasing source term) continues to be effective in reducing tritium activities in ground water. In general, ground water tritium activities continue to decline and are significantly below historic highs throughout the Building 850 plume.

Total uranium activities in ground water continue to be below the 20 pCi/L cleanup standard in samples from all wells in the Building 850 OU with the exception of two samples collected from wells NC7-28 (21 pCi/L, February 2008) and NC7-29 (22 pCi/L, April 2008). Subsequent samples collected from well NC7-28 in April, July, and October 2008 yielded uranium activities below the 20 pCi/L cleanup standard. The overall extent of total uranium activities at Building 850 has not changed significantly. The remediation strategy for uranium at Building 850 continues to be protective given that: (1) total uranium activities in Building 850 ground water generally remain below the 20 pCi/L cleanup standard; (2) the areal extent of depleted uranium has not changed during the period of monitoring; and (3) the temporal trends in $^{235}U/^{238}U$ isotope ratios from past samples have remained stable.

The overall extent and maximum concentrations of nitrate and perchlorate in ground water are also similar to those observed in previous years. An *in situ* perchlorate bioremediation treatability test is scheduled for 2009. The objective of this test is to evaluate the efficacy of *in situ* enhanced remediation methods to reduce perchlorate ground water concentrations immediately downgradient of the Building 850 Firing Table. Recently installed well W-850-2417 will serve as a reagent injection well and nearby wells NC7-28 and W-850-2416 will serve as performance monitor wells for this test.

2.5.2.3. Building 850 OU Remedy Performance Issues

There were no new issues that affect the performance of the cleanup remedy (MNA) for tritium in the Building 850 OU during this reporting period. The remedy for tritium continues to be effective and protective of human health and the environment, and to make progress toward cleanup. Perchlorate, uranium, RDX in ground water downgradient of the Building 850 Firing Table area will be closely monitored and reported. Temporal trends in these COCs will be used to assess whether an active source remains beneath the firing table. An *in situ* bioremediation treatability test is planned to remediate perchlorate in ground water in the Building 850 Source Area. Although this treatability test specifically targets perchlorate, the performance of this technology with respect to uranium and RDX remediation or stabilization will also be evaluated. This test has been delayed pending finalization by the RWQCB of the WDR-R5-2008-0149 permit for *in situ* remediation and also by the Building 850 Removal Action, which will be completed during 2009.

2.6. Building 854 OU 6

The Building 854 Complex was used to test the stability of weapons and weapon components under various environmental conditions and mechanical and thermal stresses. A map of Building 854 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.6-1.

Three GWTSs are currently operated in the Building 854 OU; Building 854-Source (854-SRC) Building 854-Proximal (854-PRX), and Building 854-Distal (854-DIS). One SVTS is also operated at 854-SRC.

The 854-SRC GWTS began operation in December 1999 removing VOCs and perchlorate from ground water. Ground water extraction was expanded in September 2006 from one well, W-854-02 extracting at a flow rate of approximately 1 gpm to include W-854-18A, W-854-17, and W-854-2218 currently extracting at an approximate combined flow rate of 2.0 to 2.7 gpm. The GWTS configuration includes a particulate filtration system, two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, and three aqueous-phase GACs connected in series for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses.

A SVTS began operation at the 854-SRC in November 2005. Soil vapor is currently extracted from W-854-1834 at an approximate flow rate of 45 to 50 scfm. This system consists of vapor-phase GAC to remove VOCs from extracted soil vapor. Treated vapors are discharged to ambient atmosphere.

The 854-PRX GWTS began operation in November 2000 removing VOCs, nitrate, and perchlorate from ground water. Ground water is currently extracted at an approximate flow rate of 1.5 gpm from well W-854-03 located southeast of the Building 854 complex. The GWTS configuration includes two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, three aqueous-phase GACs connected in series for VOC removal, and above ground containerized wetland biotreatment for nitrate removal prior to being discharged into an infiltration trench. In 2007, the treatment system was modified to replace the solar power with site power to increase the volume of extracted ground water by operating the GWTS 24-hours a day.

The 854-DIS GWTS began operation in July 2006 removing VOCs and perchlorate from ground water. Ground water is extracted from well W-854-2139 at an instantaneous flow rate of 1.2 gpm, when the solar-powered facility operates intermittently. However, the current operational flow rate averaged over time is approximately 0.015 to 0.02 gpm. The GWTS configuration includes two SR-7 ion-exchange resin columns connected in series for perchlorate treatment followed by three aqueous-phase GACs connected in series for VOC removal prior to being discharged into an infiltration trench.

2.6.1. Building 854 OU Ground Water Treatment System Operations and Monitoring

This section is organized into five subsections: facility performance assessment; operations and maintenance issues; receiving water monitoring; compliance summary; and sampling plan evaluation and modifications.

2.6.1.1. Building 854 OU Facility Performance Assessment

The monthly ground water discharge volumes and rates and operational hours are summarized in Tables 2.6-1 through 2.6-3. The total volume of ground water treated and mass removed during the reporting period is presented in Table Summ-1. The cumulative volume of ground water treated and discharged and the mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Tables 2.6-4 and 2.6-5. The pH measurement results are presented in Appendix A.

2.6.1.2. Building 854 OU Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the 854-SRC GWTS and SVTS, and 854-PRX and 854-DIS GWTSs during second semester:

<u>854-SRC GWTS and SVTS</u>

- The SVTS was offline from April 17 to July 9 for rebound testing. Extremely high temperatures caused the soil vapor system to shut off shortly after re-start. The SVTS was restarted on July 14. The SVTS again shut down on July 25 due to a high temperature interlock and was restarted on July 28.
- The GWTS was offline from February 25th to July 9. The system was restarted following flow meter, wiring, and software installation.
- The SVTS and GWTS were shut down from October 4 to October 6 and November 26 to December 1 due to Site 300 power outages.
- The SVTS only ran intermittently during November due to several different interlock shutdowns.
- Extraction wells W-854-17 and W-854-18A were shut off on December 10 for the rest of the reporting period due to the potential for freeze damage. The facility continues to operate on the remaining extraction wells (W-854-2218 and W-854-02). The SVTS shut down on December 12 again due to a high temperature interlock problem. It was re-

started on December 15, but again shut down on December 16 and left offline for the remainder of the reporting period for freeze protection.

854-PRX GWTS

- 854-PRX was offline at the start of the reporting period and was restarted July 21 after receipt of sample results and the calculation of new acetic acid doses.
- Extraction well (W-854-03) pump failed on July 23. The pump was replaced and the system was restarted on August 12.
- The GWTS was shut down on August 13 for GAC change-out due to a leak in the first GAC canister.
- The GWTS was shut down from October 15 to November 5 while new acetic acid for the biotreatment unit was obtained. The ion-exchange resin was changed out during the down time due to perchlorate breakthrough between columns.
- The GWTS was shut down from September 16 to September 17 and November 26 to December 1 due to Site 300 power outages.
- 854-PRX was shut down on December 10 for the rest of the reporting period to protect the facility from damage caused by freezing temperatures.

854-DIS GWTS

- 854-DIS shut down on December 2 due to battery failure. The batteries were replaced on December 8, the facility was sampled, and then shut down on December 9 for the rest of the reporting period to protect the facility from damage caused by freezing temperatures.

2.6.1.3. Building 854 OU Compliance Summary

The 854-SRC, 854-PRX, and 854-DIS GWTSs all operated in compliance with the Substantive Requirements for Wastewater Discharge. The 854-SRC SVTS operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

2.6.1.4. Building 854 OU Facility Sampling Plan Evaluation and Modifications

The Building 854 OU facility sampling and analysis plan complies with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.6-6. The only modifications made to the plans included additional monitoring conducted at 854-PRX to evaluate acetate injection rates and nitrate concentrations.

2.6.1.5. Building 854 OU Treatment Facility and Extraction Wellfield Modifications

The only treatment system modification during this reporting period included the installation of a new type of acetate injection pump at 854-PRX, which will allow for better control of actetate injection into the bio-treatment units. There were no extraction wellfield modifications made in OU 6 during the reporting period.

2.6.2. Building 854 OU Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.6-7. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions: sixteen required analyses were not performed because there was insufficient water in the wells to collect the samples and three were not collected because the GWTS was offline during second quarter.

A ground water elevation contours for the $Tnbs_1/Tnsc_0$ HSU and hydraulic capture zones for the extraction wells that were active during first semester 2008 are presented in Figure 2.6-2. Ground water elevations are posted for the Qls and $Tnbs_1$ HSUs on Figure 2.6-6.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.6.3. Building 854 OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

2.6.3.1. Building 854 OU Mass Removal

The monthly ground water mass removal estimates are summarized in Tables 2.6-8 through 2.6-10. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

2.6.3.2. Building 854 OU Contaminant Concentrations and Distribution

At the Building 854 OU, VOCs are the primary COCs detected in ground water and perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the $Tnbs_1/Tnsc_0$ HSU. Total VOC isoconcentration data for the $Tnbs_1/Tnsc_0$ HSU based on data collected during the second semester 2008 are contoured and presented on Figure 2.6-3. Perchlorate isoconcentration data for the $Tnbs_1/Tnsc_0$ HSU, based on data collected during the first semester 2008 are contoured and presented on Figure 2.6-4. A map showing nitrate concentrations collected during the first semester 2008 for the $Tnbs_1/Tnsc_0$ HSU is presented on Figure 2.6-5. A map showing total VOC, perchlorate, and nitrate concentrations for the Qls and $Tnbs_1$ HSUs is presented on Figure 2.6.6. Hydraulic capture zones are presented on the $Tnbs_1/Tnsc_0$ HSU ground water elevation and total VOC maps for the $Tnbs_1/Tnsc_0$ HSU (Figures 2.6-2 and 2.6-3).

2.6.3.2.1. Total VOC Contaminant Concentrations and Distribution

The maximum second semester 2008 concentration of total VOCs in $Tnbs_1/Tnsc_0$ HSU ground water was 100 µg/L (W-854-02, July 2008). TCE comprises all of the total VOCs observed in ground water at Building 854, except for cis-1,2-DCE concentrations detected in samples from wells W-854-17 and W-854-2139. The maximum cis-1,2-DCE ground water concentration detected during the second semester of 2008 was 2.6 µg/L (W-854-17, October 2008). Overall, total VOC concentrations in the $Tnbs_1/Tnsc_0$ HSU have decreased from a historic pre-remediation maximum of 2,900 µg/L detected in 1997 in ground water from well W-854-02. Two total VOC plumes exist in the $Tnbs_1/Tnsc_0$ HSU; a northern plume and a less extensive southern plume. The northern plume encompasses the 854-SRC and 854-PRX areas and is separated from the southern plume by a region where total VOC concentrations are below the 0.5 µg/L reporting limit (wells W-854-1902 and W-854-1822), as shown on Figure 2.6-3. The southern plume is in the vicinity of former water supply Well 13 (Figure 2.6-3). While the extent of total VOCs impacting Building 854 ground water with concentrations above the 0.5 µg/L reporting limit has remained relatively stable over time, since remediation has started: (1) the portion of the northern VOC plume with concentrations greater than 50 µg/L has decreased and is limited to the immediate vicinity of the Source Area; (2) the extent of the northern total VOC plume with concentrations greater than 10 µg/L has decreased; and (3) the extent of the southern total VOC plume with concentrations greater than 5 µg/L has decreased significantly in size. Total VOCs were detected in shallow perched ground water in $Tnbs_1$ well W-854-10 located in the 854 Source Area during second semester 2008 at a maximum concentration of 16 µg/L. Although this is a decrease from the first semester 2008 maximum of 34 µg/L, the long-term total VOC concentrations in this well exhibit a slightly increasing trend.

2.6.3.2.2. Perchlorate Contaminant Concentrations and Distribution

The maximum 2008 perchlorate concentration in $Tnbs_1/Tnsc_0$ HSU ground water was 22 µg/L (W-854-1823, June 2008). The previous historic maximum concentration (27 µg/L, W-854-1823) was detected in 2003. W-854-1823 is located down gradient of the 854-PRX.

Overall, the distribution and concentrations of perchlorate in ground water in ground water are nearly identical to those observed last year. Perchlorate was not detected during 2008 in any Qls or $Tnbs_1$ wells.

2.6.3.2.3. Nitrate Contaminant Concentrations and Distribution

The maximum 2008 nitrate concentration in $Tnbs_1/Tnsc_0$ HSU ground water was 51 mg/L (W-854-02, July 2008). During 2008, nitrate was detected above the 45 mg/L cleanup standard in samples from two additional $Tnbs_1/Tnsc_0$ HSU extraction wells, W-854-03 (854-PRX) and W-854-2218 (854-SRC). Additionally, during 2008, nitrate was detected above the 45 mg/L cleanup standard in samples from Qls well W-854-05 (57 mg/L, May 2008) upgradient of the 854 TCE Source Area and $Tnbs_1$ well W-854-14 (230 mg/L, June 2008) located near Building 858. Well W-854-14 historically contains the maximum nitrate detected in the Building 854 OU. The continued presence of elevated nitrate in this well is most likely due to impact from the Building 858 septic system. Geochemical data (nitrogen and oxygen isotopes) collected in the Building 854 OU as part of the Site 300 nitrate MNA study indicated some denitrification in the Neroly Formation ground water. The distribution of $Tnbs_1/Tnsc_0$ nitrate in the distal area remains essentially unchanged since this study.

2.6.3.3. Building 854 OU Remediation Optimization Evaluation

Since the expansion of the 854-SRC GWTS wellfield in 2006, the total volume of extracted ground water and contaminant mass removed has increased significantly. Ground water extraction continues to adequately capture the highest VOC concentrations, as shown by capture zones on Figure 2.6-3. A capture zone for W-854-17 is not depicted due to its extremely low yield. This well is under consideration to be taken offline as an extraction well. Well

W-854-2218 is currently capable of pumping at a higher yield and future optimization efforts at 854-SRC will include increased pumping of this extraction well. Increased pumping would add to the total volume of 854-SRC effluent discharged. The effluent is currently discharged via misting towers, which are at or near capacity. Discharge of additional effluent volume could be accommodated by either constructing more misting towers or by injection of treated effluent into an upgradient injection well. The slight increase in total VOC concentrations in $Tnbs_1$ monitoring well W-854-10 will continue to be monitored closely. If concentrations continue to increase, this well may be considered for conversion to an 854-SRC extraction well.

As part of ongoing remediation optimization activities, two rebound tests of the 854-SRC SVTS were conducted during 2008 from well W-854-1834 with the following results:

- October 2007: the system was taken offline and a vapor sample was collected from well W-854-1834 and analyzed for TCE with a result of <0.2 $ppm_{v/v}$ (reporting limit).
- April 9, 2008: the system was restarted and three vapor samples were collected from well W-854-1834 and analyzed for TCE with the results of 8 $ppm_{v/v}$ (5 minutes after restart); 0.68 $ppm_{v/v}$ (4 hours after restart); and 0.32 $ppm_{v/v}$ (1 week after restart). The system was then taken back offline for further evaluation.
- July 9, 2008: the system was restarted and a vapor sample was collected from the well W-854-1834 and analyzed for TCE with a result of 0.82 $ppm_{v/v}$ (10 minutes after restart).

The maximum historic TCE vapor concentration measured from W-854-1834 was 4.4 $ppm_{v/v}$ (November 2005). Although TCE vapor concentrations exhibit limited rebound even after extended shutdown periods, the long-term operational vapor concentrations are stable and high enough to justify continued operation of the system. Significant VOC mass continues to be removed from the Source Area due to relatively high vapor flow rates. This VOC mass is likely volatilizing from vadose zone sources beneath the 854 Core Area and VOC vapors from the underlying dissolved VOC plume in the $Tnbs_1/Tnsc_0$ ground water plume. Operation of the 854-SRC SVTS will continue until vapor concentrations decline below reporting limits even after extended shutdown periods. At that time, the 854-SVTS will enter a period of testing specified by SVE system shutdown criteria.

Construction activities for full time operation of 854-PRX were completed in September 2007, increasing overall extraction capacity and the extraction flow rate from well W-854-03 to 1.4 gpm. Although full-time operations have resulted in larger volumes of extracted water from W-854-03, the stabilized pumping water level in this well remains more than 10 ft above the screen top. This indicates that well W-854-03 can sustain even higher long-term flow rates based on the amount of available drawdown in this well after long-term pumping at 1.4 gpm. However, increasing the flow at this facility may exceed the capacity of the nitrate biotreatment unit and injection trench. Different treatment options, including the *in situ* treatment of nitrate in an upgradient injection well or misting are being evaluated to increase hydraulic capture of the TCE plume in this area and enhance overall ground water cleanup efforts in OU 6.

The single extraction well at the 854-DIS GWTS (W-854-2139) pumps at a low average rate of 0.02 gpm because of cyclic pumping from the well, which cannot sustain prolonged pumping without excessive drawdown. Techniques for optimizing ground water treatment in the distal VOC plume area are being evaluated.

2.6.3.4. Building 854 OU Remedy Performance Issues

Although there were no new issues that affect the performance of the cleanup remedy for the Building 854 OU during this reporting period, the above ground limitations at 854-SRC and 854-PRX continue to limit the performance of the extraction wellfields. The overall remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.7. Building 832 Canyon OU 7

Building 832 Canyon facilities were used to test the stability of weapons and associated components under various environmental conditions. Contaminants were released from Buildings 830 and 832 through piping leaks and surface spills during testing activities at these buildings.

Three GWTSs and two SVTS are operated in the Building 832 Canyon OU: Building 832-Source (832-SRC), Building 830-Source (830-SRC), and Building 830-Distal South (830-DISS). The 832-SRC and 830-SRC facilities extract and treat both ground water and soil vapor, while the 830-DISS facility extracts and treats ground water only.

A map of Building 832 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.7-1.

The 832-SRC GWTS removes VOCs and perchlorate from ground water and the SVTS removes VOCs from soil vapor. The GWTS and SVTS began operation in September and October 1999, respectively. Initially, ground water was extracted from nine wells at a combined total flow rate that initially ranged from 30 to 300 gallons per day (gpd). The total flow eventually dropped to 5 to 50 gpd due to lowering of the water table by pumping. In early 2005, the source area extraction wellfield was reduced to two wells (W-832-12 and W-832-15) operating with vacuum enhancement and a combined flow rate ranging from 60 to 220 gpd. In late 2005, the extraction wellfield was expanded to include three additional downgradient wells (W-832-01, W-832-10, and W-832-11). As a result, the combined flow rate increased to about 1,300 gpd, and VOC concentrations in facility influent increased four-fold. Well W-832-25 was connected to the facility in July 2006. Currently, ground water is extracted from wells W-832-01, W-832-10, W-832-11, W-832-12, W-832-15 and W-832-25 at an approximate combined flow rate of 0.16 gpm. Soil vapor is extracted from wells W-832-12 and W-832-15 at an approximate combined flow rate of approximately 3.0 to 4.4 scfm. The current GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange columns with SR-7 resin connected in series to remove perchlorate, and three aqueous-phase GAC units (also connected in series) to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. A positive displacement rotary lobe blower is used to create a vacuum at selected wellheads through a system of manifolded piping. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit from the San Joaquin Valley Unified Air Pollution Control District.

The 830-SRC GWTS removes VOCs and perchlorate from ground water and the SVTS removes VOCs from soil vapor. The GWTS and SVTS began operation in February and May 2003, respectively. Ground water was extracted from four wells at a total flow rate ranging from 5 to 100 gpd. The 830-SRC extraction wellfield was expanded in 2006. Seven GWTS extraction wells (W-830-49, W-830-1829, W-830-2213, W-830-2214, W-830-57, W-830-60, and W-830-2215) were added to the original three (W-830-1807, W-830-19, and W-830-59). The expansion well testing began during 2006. The tests were completed and the expanded wellfield was in full operation during the first semester 2007. The 830-SRC GWTS is currently extracting ground water at a combined flow rate of approximately 5 to 7 gpm. The GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange columns with SR-7 resin connected in series to remove perchlorate, and three in series aqueous-phase GAC units to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. The 830-SRC soil vapor extraction wellfield was also expanded to include well W-830-49 in 2006. Soil vapor is extracted from wells W-830-1807 and W-830-49 using a liquid ring vacuum pump at a current combined flow rate of approximately 30 to 33 scfm. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit from the San Joaquin Valley Unified Air Pollution Control District.

The 830-DISS GWTS began operation in July 2000 removing VOCs, perchlorate, and nitrate from ground water. Approximately 1 gpm of ground water was extracted from three wells (W-830-51, W-830-52, and W-830-53) using natural artesian pressure. The GWTS configuration consisted of a Cuno filter for particulate filtration, two aqueous-phase GAC units in series to remove VOCs, two in series ion-exchange columns with SR-7 resin to remove perchlorate, and three bioreactor units for nitrate reduction. These units were open-container wetland bioreactors containing microorganisms that use nitrate during cellular respiration. Acetic acid was added to the process stream as a carbon source. Treatment system effluent was discharged via a storm drain that discharges to the Corral Hollow alluvium. At the request of the Regional Water Quality Control Board, the facility was modified during the first semester 2007 to cease discharge of treated water to a surface water drainage way. The modification included the addition of a fourth well, W-830-2216, to the extraction well field. The GWTS is now extracting ground water at a combined flow rate of approximately 2 to 3 gpm. Currently, extracted ground water flows through ion-exchange canisters to remove perchlorate at the 830-DISS location. The water is then piped to the Central GSA GWTS for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses.

2.7.1. Building 832 Canyon OU Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modifications.

2.7.1.1. Building 832 Canyon OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes, rates, and operational hours are summarized in Tables 2.7-1 through 2.7-3. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Tables 2.7-4 and 2.7-5. The pH measurement results are presented in Appendix A.

2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the 832-SRC GWTS and SVTS, 830-SRC GWTS and SVTS, and 830-DISS GWTS during second semester:

<u>832-SRC GWTS and SVTS</u>

- The 832-SRC SVTS was shutdown from August 15th to August 18th and again from August 29th until September 2nd due to high temperature interlocks.
- The extraction pump in well W-832-12 became non-operational in September. The well was taken offline for both GWE and SVE on October 14th, at which time the pump was removed. A new pump was installed in W-832-12 on November 24th, and was put back on-line at that time.
- A small crack in the check valve in the pipeline to extraction well W-832-25 was discovered December 9th. This well and extraction wells W-832-01, W-832-10, W-832-11, and W-832-25 were turned off for the rest of the reporting period to prevent damage due to freezing temperatures. Ground water extraction continues from wells W-832-12 and W-832-15 and vapor extraction continues.

<u>830-SRC GWTS and SVTS</u>

- During July, extraction well pumps were replaced for W-830-1807, W-830-19, W-830-57 and W-830-60 and W-830-2214.
- GAC was replaced on July 28th due to VOC breakthrough from the first carbon canister.
- Power-supply failure shut down extraction wells W-830-60, W-830-2314, and W-830-2315 on September 22nd. A new power supply was installed and the extraction pumps were restarted on October 9th.
- Both the GWTS and SVTS were temporarily shutdown on October 22nd to replace the misting tower heads. The SVTS is generally shutdown when the GWTS is offline due to upconing that occurs without water extraction.
- Extraction wells W-830-19, W-830-2214, W-830-1829, W-830-2213, and W-830-59 were turned off on December 9th for the rest of the reporting period to prevent damage from freezing temperatures. Ground water extraction continues from wells W-830-49, W-830-57, W-830-60, and W-830-2215. Vapor extraction continues from extraction wells W-830-49 and W-830-1807.

<u>830-DISS GWTS</u>

- From August through November, 830-DISS was operated on weekdays only and shut down on weekends until testing of the check valve that regulates flow to the Central GSA treatment facility was completed. This was being done to prevent overflow at the Central GSA facility if the valve failed. The valve was being tested weekly for a month, and then monthly. After it passed the testing, 830-DISS was operated full-time starting in December. The GWTS was also shutdown over the Thanksgiving holiday, November 25th to December 1st.
- The GWTS was shut down from November 10th to November 17th while a leak in the piping that conveys water to the Central GSA facility was repaired.

- Extraction well W-830-2216 was shut down on December 11th for the rest of the reporting period to prevent damage from freezing temperatures. The facility continues to operate on the remaining extraction wells (W-830-51 and W-830-53).

2.7.1.3. Building 832 Canyon OU Compliance Summary

The 830-SRC, 832-SRC, and 830-DISS GWTSs operated in compliance with Substantive Requirements during the reporting period. The 830-SRC and 832-SRC SVTSs operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

2.7.1.4. Building 832 Canyon OU Facility Sampling Plan Evaluation and Modifications

The Building 832 Canyon OU treatment facility sampling and analysis plan complies with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.7-6. The only modifications made to the plan during the reporting period included additional samples collected at the 832-SRC and 830-SRC GWTSs for breakthrough evaluation and to remain within compliance due to the discharges at 832-SRC.

2.7.1.5. Building 832 Canyon OU Treatment Facility and Extraction Wellfield Modifications

There were no treatment facility or wellfield modifications in OU 7 during the second semester of 2008.

2.7.2. Building 832 Canyon OU Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.7-7. This table explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; sixty-three required analyses were not performed because there was insufficient water in the wells to collect the samples and one required analysis was not performed because the pump was not operational.

Ground water elevation data are posted for the Qal/WBR and $Tnsc_{1a}$ and contoured for $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs as presented in Figures 2.7-2, 2.7-4, 2.7-3, and 2.7-5, respectively. The ground water elevation maps also show hydraulic capture zones for the extraction wells that were active during second semester.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.7.3. Building 832 Canyon OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; contaminant concentrations and distribution; remediation optimization evaluation; and performance issues.

2.7.3.1. Building 832 Canyon OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.7-8 through 2.7-10. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

2.7.3.2. Building 832 Canyon OU Contaminant Concentrations and Distribution

VOCs (mainly TCE) are the primary COCs detected in ground water at the Building 832 Canyon OU. Perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the $Tnsc_{1a}$, $Tnsc_{1b}$ and Qal/WBR HSUs. Total VOCs have also been detected in low concentrations in the $Tnbs_2$ and Upper $Tnbs_1$ HSUs. Total VOC isoconcentration data are posted for the Qal/WBR and $Tnsc_{1a}$ and contoured for the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs, as presented on Figures 2.7-6, 2.7-8, 2.7-7, and 2.7-9, respectively. Hydraulic capture zones are presented on the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSU ground water elevation and total VOC maps. Concentration maps for the secondary COCs are presented on Figures 2.7-10 through 2.7-17. Total isoconcentration data for the secondary COC maps are posted, except for the perchlorate data, which are contoured for the $Tnsc_{1b}$ HSU. All secondary COC maps are based on data collected during the first semester of 2008. For collocated wells, the highest concentration was used for contouring.

2.7.3.2.1. Total VOC Contaminant Concentrations and Distribution

Total VOC concentrations in Qal/WBR HSU ground water have decreased from a historic maximum of 10,000 µg/L (SVI-830-035) in 2003 to a maximum of 2,700 µg/L (SVI-830-031) during 2008. Historically, ground water samples from wells located in the Building 830 Source Area have contained the highest total VOC concentrations in the Qal/WBR HSU. During 2008, VOC samples were not collected from some Qal/WBR wells in the Building 832 and 830 Source Areas because the water table has declined below the screen bottom in these wells due to below average rainfall. Total VOC concentrations in ground water samples from Qal/WBR HSU guard wells located near the Site 300 boundary south of Building 832 Canyon continue to be very low (<1 µg/L) to below reporting limits (<0.5 µg/L) and have decreased from a historic maximum of 2.0 µg/L (W-6BS) in 2001 to a maximum of 0.7 µg/L (W-6BS) in 2008.

In the Building 832 source area, a significant reduction in total VOC concentrations in both ground water and vapor have been achieved since remediation began in 1999. Total VOC concentrations in wells screened in either the Qal/WBR or the $Tnsc_{1b}$ HSUs in this Source Area have decreased from a historic maximum of 1,800 µg/L (W-832-23) in 1998 to a maximum total VOC concentration of 600 µg/L (W-832-12) in 2008. The Building 832 Source Area has been almost completely de-saturated as a result of ongoing ground water extraction and limited rainfall. Ground water samples (for VOC analyses) were not collected from several $Tnsc_{1b}$ HSU wells because the water table has declined below the screen bottom in these wells. Total VOC concentrations in soil vapor have declined significantly from a historic maximum of 1.8 $ppm_{v/v}$ in September 2001 to a maximum of 1.1 $ppm_{v/v}$ in November 2008. Routine monitoring of vapor concentrations indicates that the soil vapor extraction system continues to remove VOC mass and decrease VOC concentrations in this Source Area.

Since remediation began in the Building 830 Source Area in 2000, a significant reduction in total VOC concentrations in ground water has been achieved. Nevertheless, the overall extent of VOCs in this area has not changed significantly over the past several years. Total VOC concentrations in $Tnsc_{1b}$ HSU ground water have decreased by an order-of-magnitude from a historic maximum of 13,000 µg/L (W-830-49) in 2003 to a maximum of 4,700 µg/L (W-830-19) in 2008. Total VOC concentrations in $Tnsc_{1b}$ HSU artesian wells W-830-51, W-830-52, and W-830-53, located farther south along Building 832 Canyon, have also decreased from a historic maximum of 170 µg/L in 2002 to a maximum of 67 µg/L (W-830-52) in 2008. The leading edge of the $Tnsc_{1b}$ VOC plume with concentrations above the 0.5 µg/L reporting limit, has remained within the Site 300 boundary. Immediately downgradient of the leading edge of the VOC plume, total VOC concentrations in $Tnsc_{1b}$ HSU guard wells continue to be below the 0.5 µg/L reporting limit.

Remediation of the $Tnsc_{1a}$ HSU began with the 830-SRC wellfield expansion in early 2007. Since then, total VOC concentrations in $Tnsc_{1a}$ HSU ground water have decreased by one order-of-magnitude from a historic maximum of 1,700 µg/L (W-830-27) in 1998 to a maximum of 530 µg/L (W-830-27) during 2008. Monitor well W-830-2311, which is located near Spring 3, was installed in 2007 as a $Tnsc_{1a}$ HSU monitor well to evaluate the downgradient extent of VOCs. The highest total VOC concentration sampled in this well during 2008 was 41 µg/L (February 2008). Total VOC concentrations in this well were significantly lower in the second semester of 2008 (1.7 µg/L, September 2008). To match the timeframe of other second semester $Tnsc_{1a}$ sampling events, this lower VOC concentration has been posted on Figure 2.7-8.

The variability of total VOC results in W-830-2311 appears to be influenced by sample methodology. Higher total VOC concentrations have been measured when the well is purged of three casing volumes prior to sample collection. These samples are likely more representative of actual ground water concentrations. Future sampling of well W-830-2311 will be conducted by purging three casing volumes prior to sample collection. A new $Tnsc_{1a}$ HSU guard well, located downgradient of well W-830-2311 and near the site boundary, is planned for installation in 2009.

Since remediation began in the upper $Tnbs_1$ HSU, total VOC concentrations in ground water have decreased from a historic maximum of 100 µg/L (W-830-28, June 1998) in 1998 to a maximum of 36 µg/L (W-830-28) in 2008. The spatial extent of total VOCs in the Upper $Tnbs_1$ also decreased slightly. Total VOCs were not detected above the 0.5 µg/L reporting limit in Upper $Tnbs_1$ guard wells W-830-20 and W-832-2112 during 2008. Well W-830-15, located even farther downgradient of the guard wells (near the southern end of the Building 832 Canyon), also remains below the reporting limit for total VOCs. The continued absence of VOCs in these downgradient monitor wells indicates that the Upper $Tnbs_1$ extraction wellfield is adequately capturing the VOC plume in this HSU.

2.7.3.2.2. HE Compound Concentrations and Distribution

HE compounds (RDX, HMX, 2-amino-4,6-dinitrotoluene, and nitrobenzene) are not commonly found in ground water in the Building 832 Canyon OU. During 2008, HE compounds were only detected above their respective reporting limits in one OU7 well. On August 5, 2008, HMX was detected in ground water from well W-880-01 at a concentration of 540 µg/L. Guard well W-880-01 (screened in the $Tnbs_2$) is located at the southern end of the Building 832 Canyon near the site boundary. It has been routinely sampled for HE compounds for many years and has always been below the detection limit for this COC. Because of this history, laboratory error is suspected. The well will be re-sampled for HE compounds during 2009.

2.7.3.2.3. Perchlorate Concentrations and Distribution

The maximum perchlorate concentration detected in Qal/WBR HSU ground water have decreased from a historical maximum of 51 µg/L in well W-830-34 (December 1998) to a 2008 maximum of 15 µg/L (February 2008) in 832-SRC extraction well W-832-13. Monitor well W-832-23 is used to constrain plume concentrations in both the Qal/WBR and $Tnsc_{1b}$ HSUs, since it is screened across both intervals. The maximum perchlorate concentration sampled in ground water from W-832-23 during 2008 was 5.1 µg/L. Perchlorate was not detected above the 4 µg/L reporting limit in Qal/WBR guard wells W-35B-01 and W-880-02 during 2008.

Due to the effectiveness of the extraction wellfield, the extent of perchlorate above 6 µg/L in the $Tnsc_{1b}$ HSU (Figure 2.7-11) was significantly reduced during 2008. The maximum perchlorate ground water concentration sampled in the $Tnsc_{1b}$ HSU during 2008 was 15 µg/L (W-832-13, February 2008). Historically, well W-830-58 has contained ground water with the highest perchlorate concentration in this HSU (26 µg/L, May 2001). Perchlorate was not detected above the 4 µg/L reporting limit in any $Tnsc_{1b}$ guard wells during 2008.

The maximum perchlorate ground water concentration sampled in the $Tnsc_{1a}$ HSU during 2008 was 8.7 µg/L (W-830-2214, July 2008 and W-832-25, July 2008). These concentrations are not shown on Figure 2.7-12 because the data on this figure are based on first quarter data to match the ground water elevation data. The highest historic perchlorate concentration in the $Tnsc_{1a}$ HSU was 13 µg/L (W-832-25, February 1999).

Perchlorate was not detected above the reporting limit of 4 µg/L from any ground water samples taken from the Upper $Tnbs_1$ HSU during 2008.

2.7.3.2.4. Nitrate Concentrations and Distribution

In general, nitrate ground water concentrations continue to be high in the vicinity of the Building 832 and 830 source areas and remain low to below the reporting limit (<0.5 mg/L) in the downgradient, deeper parts of all Building 832 Canyon HSUs.

Nitrate ground water concentrations detected in samples from the Qal/WBR HSU during 2008 ranged from <1 mg/L (guard wells) to 240 mg/L (SVI-830-033, March 2008).

Nitrate ground water concentrations detected in samples from the $Tnsc_{1b}$ HSU ranged from <0.5 mg/L to 180 mg/L (W-830-49, July 2008). A sample from well W-830-49 also contained the highest historic nitrate concentration in this HSU (501 mg/L, June 1998). Nitrate concentrations in the $Tnsc_{1b}$ guard wells ranged from <0.5 mg/L to 2.0 mg/L (W-830-1831, February 2008), well below the 45 mg/L cleanup standard.

During 2008, the maximum nitrate ground water concentration detected in samples from the $Tnsc_{1a}$ HSU was 73 mg/L (W-832-25, February 2008). Nitrate ground water concentrations detected in samples from the Upper $Tnbs_1$ ranged from <0.5 mg/L to 24 mg/L (W-26R-01, November 2008). Nitrate ground water concentrations in guard wells in $UTnbs_1$ HSU were not detected above the reporting limit. A trace concentration (0.64 mg/L) of nitrate was detected in ground water from guard well W-35B-01 in July 2007; but in 2008, nitrate was not detected above the reporting limit in this well.

The very low concentrations in the down gradient areas and the absence of detectable nitrate in the site boundary guard wells are consistent with the interpretation that nitrate is naturally attenuating *in situ*.

2.7.3.3. Building 832 Canyon OU Remediation Optimization Evaluation

Ground water and soil vapor extraction well field modification and optimization continued during 2008 to prevent offsite plume migration, reduce source area concentrations, and increase mass removal. The expanded 832-SRC and 830-SRC extraction wellfields have increased hydraulic capture, while preventing the downward migration of contaminants into deeper HSUs or laterally toward the site boundary and Site 300 water-supply Well 20.

Ground water yield continues to be low from the 832-SRC extraction wells and hydraulic capture is difficult to assess because these wells cannot maintain continuous operation. The low yield is due to a combination of low hydraulic conductivity geologic materials, dewatering, and limited recharge. In the future, monitor wells such as W-832-23 may be added to the extraction wellfield to improve hydraulic capture in the Building 832 source area.

COC concentrations in the Building 830 and Building 832 source areas generally exhibit decreasing trends. Maximum total VOC concentrations have decreased significantly in both the $Tnsc_{1b}$ and Qal/WBR HSUs. COC concentrations have decreased by an order-of-magnitude in the Upper $Tnbs_1$ HSU and remain relatively stable in the $Tnsc_{1a}$ HSU. COC concentrations in the Distal Areas also remain relatively stable.

The extent of hydraulic capture associated with the $Tnsc_{1b}$ HSU extraction wells targets the highest total VOC plume concentrations emanating from the two Source Areas (Figure 2.7-7). Steep terrain and unstable canyon bottom soil conditions have limited the installation of additional OU7 extraction wells. Due to declining water levels and reduced yield, $Tnsc_{1b}$ HSU extraction wells W-830-1829 and W-830-2213 did not operate sufficiently to determine hydraulic capture zones on Figure 2.7-3. Ground water extraction from these wells may resume in the future depending on available recharge.

Two extraction wells are currently operating in the $Tnsc_{1a}$ HSU; one extraction well is located near B830-SRC and another is located downgradient of B832-SRC in the Distal Area of this plume. Water supply continues to decline in the B830-SRC area, limiting continuous extraction. During the short time this HSU has been under remediation, total VOC concentrations have remained relatively stable.

Hydraulic capture associated with Upper $Tnbs_1$ extraction wells also targets the highest total VOC concentrations. Monitor well W-830-1832, which is located on the leading edge of the VOC plume, displayed increasing total VOC concentrations prior to activation of the 830-SRC GWTS. Following activation of the GWTS, total VOC concentrations in this well have steadily declined. Upper $Tnbs_1$ guard wells, which are located downgradient of W-830-1832 and upgradient of water-supply Well 20, continue to be below the reporting limit for all COCs. Decreasing COC concentrations downgradient of the 832-SRC and 830-SRC extraction wellfields and the continued absence of COCs in guard wells demonstrate the effectiveness of the extraction wellfield in removing mass and reducing the migration of contaminants.

As extraction from the 832-SRC, 830-SRC and 830-DISS extraction wells continues, it is expected that concentrations in all identified HSUs within the OU will continue to decline. Over the past year, the extent of the Upper $Tnbs_1$ total VOC plume has decreased slightly and this trend is expected to persist with continued pumping. Total VOC concentration trends in the Upper $Tnbs_1$ continue to be carefully monitored due to the potential influence of pumping at water-supply Well 20 and backup water-supply Well 18.

2.7.3.4. Building 832 Canyon OU Remedy Performance Issues

With the exception of declining water levels and limited recharge in the 832 source area, there were no new issues that impact the performance of the cleanup remedy for the

Building 832 Canyon OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.8. Site 300 Site-Wide OU 8

The Site 300 Site-Wide OU is comprised of release sites at which no significant ground water contamination and no unacceptable risk to human health or the environment are present. For this reason, a monitoring-only interim remedy was selected for the release sites in the Site-Wide Record of Decision (U.S. DOE, 2008). The monitoring conducted during the reporting period for these release sites is discussed below.

2.8.1. Building 801 and Pit 8 Landfill

The Building 801 Firing Table was used for explosives testing until it was discontinued in 1998, and the firing table gravel and some underlying soil were removed. Waste fluid discharges to the Building 801 Dry Well from the late 1950s to 1984, resulted in contamination of the soil and ground water. Debris from the firing table was buried in the nearby Pit 8 Landfill until 1974. A map of the Building 801 and Pit 8 Landfill area showing the locations of the building, landfill, monitor wells, ground water elevations, and approximate ground water flow direction is presented in Figure 2.8-1.

2.8.1.1. Building 801 and Pit 8 Landfill Ground Water Monitoring

Wells K8-01 and K8-03B monitor Building 801 ground water contaminants while wells K8-02B, K8-04, and K8-05 are detection monitoring wells for the Pit 8 Landfill. Detection monitoring of this landfill, which is discussed in Section 3.2, is conducted to determine if releases have occurred.

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-1. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; ten required analyses were not performed because there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.8.1.2. Building 801 and Pit 8 Landfill Contaminant Concentrations and Distribution

At Building 801, VOCs are the primary COCs detected in ground water. Perchlorate and nitrate are the secondary COCs. There are no COCs in ground water at the Pit 8 Landfill. The results of the detection monitoring of the Pit 8 Landfill are discussed in Section 3.2. Nitrate, perchlorate, and total VOC data are posted for the $Tnbs_1$ HSU as presented on Figure 2.8-1.

During 2008, the maximum total VOC concentration detected in ground water samples from wells in the Building 801/Pit 8 Landfill area was 5.5 µg/L (K8-01, April 2008). This total VOC concentration was comprised of 3.4 µg/L of TCE and 2.1 µg/L of 1,2-DCA. Total VOC concentrations detected in ground water samples collected from wells downgradient of Building 801 have decreased from a historic maximum of 10 µg/L at K8-01 in 1990.

During 2008, perchlorate was only detected in a duplicate sample from well K8-01 at 4.1 µg/L (April 2008). The other sample from well K8-01 and all the ground water samples from the other Building 801/Pit 8 monitor wells did not contain perchlorate above the 4 µg/L reporting limit.

Nitrate concentrations in ground water in the Building 801/Pit 8 Landfill area have been fairly stable over time. During 2008, concentrations in samples from wells K8-01 and K8-04 were above the 45 mg/L cleanup standard. The 2008 maximum nitrate concentration detected in ground water samples from wells in the Building 801/Pit 8 Landfill area was 51 mg/L (K8-01 and K8-04, April 2008). The historic maximum nitrate concentration of 64 mg/L was detected in samples collected from well K8-01 in 2002. Overall, nitrate concentrations in ground water at the Building 801/Pit 8 Landfill generally are similar to previous years.

As discussed in Section 2.5.2.1.1, tritium activities in the April 2008 samples from wells K8-01 and K8-02B were slightly greater than the reporting limit (<100 pCi/L). Tritium activity in the February 2008 duplicate sample from well K8-02B was 127 ± 56.1 pCi/L, and tritium activity in the April 2008 sample from well K8-01 was 155 ± 71.1 pCi/L. When accounting for error ranges, these data are within the 100 pCi/L background activity. Also, tritium was not detected above the reporting limit in the other February 2008 sample from well K8-02B. Tritium was not detected above the reporting limit in subsequent sampling events during 2008. The current measurements suggest that the extent of tritium from Building 850 is not increasing in this area.

2.8.2. Building 833

TCE was used as a heat-exchange fluid at Building 833 from 1959 to 1982 and was released through spills and rinse water disposal, resulting in TCE-contamination of soil and shallow perched ground water. A map showing the locations of the building, monitoring wells, and ground water elevations is presented in Figure 2.8-2.

2.8.2.1. Building 833 Ground Water Monitoring

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-2. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; eight required analyses were not performed because there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.8.2.2. Building 833 Contaminant Concentrations and Distribution

VOCs are the primary COC in ground water at Building 833. Total VOC concentrations in the Tpsg HSU are presented on Figure 2.8-2.

The Tpsg HSU is a shallow, highly ephemeral perched water-bearing zone. During heavy rainfall events, this HSU may become saturated, but quarterly monitoring of the wells from 1993 to present has shown little evidence of saturation. When saturated, monitoring conducted from 1993 to 2008 has shown a decline in total VOC concentrations in Tpsg HSU ground water from a historic maximum concentration of 2,100 µg/L in 1992 (W-833-03). During 2008, three Tpsg wells (W-833-12, W-833-28, and W-833-33) contained sufficient water for sampling. These wells yielded samples containing total VOC concentrations (all TCE) of 5.1 µg/L (March 2008), 180 µg/L (March 2008) and 170 µg/L (February 2008), respectively. VOCs were not detected in 2008 samples from deep $Tnbs_1$ HSU monitoring well W-833-30, indicating that VOC contamination continues to be confined to the shallow Tpsg perched water-bearing zone.

2.8.3. Building 845 Firing Table and Pit 9 Landfill

The Building 845 Firing Table was used from 1958 until 1963 to conduct explosives experiments. Leaching from Building 845 Firing Table debris resulted in minor contamination of subsurface soil with depleted uranium and HMX detected in samples collected from boreholes drilled in 1989. A map showing the locations of the building, landfill, monitoring wells, ground water elevations, and approximate hydraulic gradient direction in the $Tnsc_0$ HSU are presented in Figure 2.8-3.

2.8.3.1. Building 845 and Pit 9 Landfill Ground Water Monitoring

Wells K9-01 through K9-04 are detection monitoring wells for the Building 845 and Pit 9 Landfill. Detection monitoring of this landfill, which is discussed in Section 3.3, is conducted to determine if releases have occurred.

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-3. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.8.3.2. Building 845 and Pit 9 Landfill Contaminant Concentrations and Distribution

There are no COCs in ground water at Building 845 and the Pit 9 Landfill. The monitoring wells near the Pit 9 Landfill are screened in the lower Neroly Formation $Tnsc_0$ HSU. Detection monitoring of the Pit 9 landfill, which is discussed in Section 3.3, is conducted to determine any releases to ground water.

No COC concentrations maps are provided for the Building 845 and Pit 9 Landfill area as there continues to be no contamination detected in the ground water.

2.8.4. Building 851 Firing Table

The Building 851 Firing Table has been used since 1962 to conduct explosives experiments. A map showing the locations of the firing table, monitoring wells, and ground water elevations is presented in Figure 2.8-4.

2.8.4.1. Building 851 Ground Water Monitoring

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-4. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

2.8.4.2. Building 851 Contaminant Concentrations and Distribution

At the Building 851 Firing Table, uranium and tritium are the primary and secondary COCs detected in ground water, respectively. Total uranium and tritium activities are presented on Figure 2.8-4. Wells W-851-05, W-851-06, and W-851-07 are completed in the Tmss HSU. Well W-851-08 is completed in the overlying $Tnsc_0$ HSU.

The 2008 maximum total uranium activity detected in ground water samples from wells in the Building 851 area was 1.3 pCi/L (W-851-06, May 2008). The historic maximum uranium activity was 3.2 pCi/L (W-851-07, October 1991). Overall, uranium activities in ground water are similar to previous years and remain well below the 20 pCi/L cleanup standard. During 2008, tritium activities were not detected above the 100 pCi/L reporting limit in ground water samples from any Building 851 monitoring wells. The maximum tritium activity detected in Building 851 ground water was 3,790 pCi/L (W-851-08, late 1998).

3. Detection Monitoring, Inspection, and Maintenance Program for the Pits 2, 8, and 9 Landfills

The Pit 2, 8, and 9 Landfills received firing table debris from the 1950s to the 1970s. At present, there is no evidence of contaminant releases to ground water from any of these three landfills, except for low activities of depleted uranium at the Pit 2 Landfill, and no unacceptable risk or hazard to human or ecological receptors has been identified. The Detection Monitoring Program is designed to detect any future releases of contaminants from these landfills. This section presents the results for the Pit 2, 8, and 9 Landfills ground water detection monitoring network, and any landfill inspections or maintenance that was conducted during the reporting period.

3.1. Pit 2 Landfill

3.1.1. Sampling and Analysis Plan Modifications

The sampling and analysis plan for the Pit 2 Landfill ground water Detection Monitoring Program are presented in Table 3.1-1. During the reporting period ground water monitoring was conducted in accordance with the CMP monitoring requirements, except that two thorium analyses were inadvertently left off the sampling plan and fifteen required analyses were not performed because there was insufficient water in the wells to collect the samples. There were no modifications made to the plan.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

3.1.2. Contaminant Detection Monitoring Results

A map showing the locations of monitoring wells and the Pit 2 Landfill is presented on Figure 2.5-1.

The ground water elevation contour maps that include the Pit 2 Landfill are presented on Figures 2.5-2 and 2.5-3. Wells completed in the Qal/WBR HSU immediately southeast and northeast of Pit 2 continue to be dry. Depth to ground water within the $Tnbs_1/Tnbs_0$ HSU was measured at 50 ft to 55 ft beneath the Pit 2 Landfill.

A map of the second semester 2008 distribution of ground water tritium activity within the $Tnbs_1/Tnbs_0$ HSU and including the Pit 2 Landfill is presented on Figure 2.5-5. Tritium was detected below the 20,000 pCi/L cleanup standard during 2008 in samples from all the Pit 2 wells. The maximum 2008 tritium activity within the $Tnbs_1/Tnbs_0$ HSU in the area immediately south of the Pit 2 Landfill was 7,350 ± 750 pCi/L (NC2-08, April 2008). Tritium activities in this area continue to decline. The historic maximum tritium activity was detected in 1986 (January and August) from well K2-01C (49,100 pCi/L). The overall distribution of ground water tritium activities in the Pit 2 Landfill area appears to primarily be a result of transport of the Building 850 tritium plume into the Pit 2 Landfill area. Data indicate that tritium activities in ground water immediately downgradient of the landfill are decreasing and are currently a fraction of the historic maximum.

The maximum 2008 uranium activity detected in a ground water sample from this area was 10.7 pCi/L (K2-01C, April 2008). As discussed in Section 2.5.1, uranium isotope data are not reported for 2008. However, in previous years, the detection of depleted uranium in ground water samples from wells K2-01C, W-PIT2-1934, and W-PIT2-1935 indicate that the Pit 2 Landfill has added low activities of depleted uranium to the naturally-occurring uranium in the ground water.

The release of uranium from Pit 2 may have been the result of the discharge of potable water that was used to maintain a wetland habitat for red-legged frogs (a Federally-listed endangered species) within a drainage channel that extends along the northern and eastern margin of the Pit 2 Landfill. This discharge was discontinued in 2005. Since the discharge was discontinued, total uranium activities detected in Pit 2 Landfill detection monitor wells, especially in well W-PIT2-1934, have decreased and are within background levels for total uranium.

During 2008, perchlorate was detected above the 4 µg/L reporting limit, but below the 6 µg/L cleanup standard, in samples from wells K2-01C (January), NC2-08 (July), and W-PIT2-2304 (April). Perchlorate was not detected above the 4 µg/L reporting limit in subsequent samples from well K2-01C. The maximum 2008 Pit 2 Landfill area perchlorate concentration of 5.8 µg/L was measured in well W-PIT2-2304 (screened in the $Tnbs_1/Tnbs_0$ HSU). Perchlorate was not detected above the 4 µg/L reporting limit in samples from other Pit 2 Landfill area wells.

No other constituents, including VOCs, nitrate, HE compounds, metals and fluoride that were monitored during 2008 at the Pit 2 landfill as part of the Detection Monitoring Program were detected in $Tnbs_1/Tnbs_0$ HSU ground water above regulatory limits.

3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected quarterly during 2008. Animal burrows were observed.

3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester 2008 and none was found.

3.1.5. Maintenance

Some maintenance of the pit cover, including filling of animal burrows, was conducted during the second semester 2008.

3.2. Pit 8 Landfill

3.2.1. Sampling and Analysis Plan Modifications

The sampling and analysis plan for the Pit 8 Landfill ground water Detection Monitoring Program are presented in Table 2.8-1. During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; ten required analyses were not performed because there was insufficient water in the wells to collect the samples. There were no modifications made to the plan.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

3.2.2. Contaminant Detection Monitoring Results

Ground water elevations, nitrate, perchlorate, and total VOC concentrations in $Tnbs_1/Tnbs_0$ HSU ground water are presented on Figure 2.8-1.

Historic and current data indicate that total VOCs detected in ground water in the Pit 8 Landfill area are the result of releases from the former Building 801 dry well, which have migrated downgradient from Building 801 to beneath the landfill. The highest concentration of total VOCs (1,2-DCA and TCE) continues to be observed at upgradient well K8-01 where samples collected during 2008 contained 5.5 µg/L (April 2008) and 5.3 µg/L (October 2008) of total VOCs. The presence of total VOCs in ground water samples from well K8-04, immediately downgradient of the Pit 8 Landfill, at a maximum concentration of 2.4 µg/L (April 2008) appears to be a continuation of the VOC plume originating at the Building 801D dry well and is not due to a release from the Pit 8 Landfill. During 2008, 1,2-DCA was the only VOC detected above applicable cleanup standards (0.5 µg/L) at a maximum concentration of 2.1 µg/L at K8-01, upgradient of Pit 8. Nitrate was elevated above the 45 mg/L cleanup standard in 2008 samples from wells K8-01 and K8-04, collected in April 2008, both concentrations of 51 mg/L.

First semester 2008 tritium activities from two of the wells in the Pit 8 Landfill area were slightly above the 100 pCi/L background. Tritium activities were 127 ± 56.1 pCi/L (duplicate sample from K8-02B, February 2008) and 155 ± 71.1 pCi/L (K8-01, April 2008). When accounting for error ranges, these data are within the range of background activity. Additionally, tritium activity above the reporting limit (<100 pCi/L) was not detected in the other February 2008 sample from well K8-02B, or in subsequent 2008 samples. The current measurements suggest that tritium from Building 850 is not impacting this area.

Fluoride, metals, uranium isotopes, and thorium-232 concentrations/activities in samples collected during 2008 from wells upgradient and downgradient of the Pit 8 Landfill were at or below background concentrations and below regulatory limits.

Of the constituents monitored during 2008 as part of the Detection Monitoring Program in $Tnbs_1/Tnbs_0$ HSU ground water from Pit 8 Landfill area wells, only 1,2-DCA and nitrate exceeded cleanup standards.

3.2.3. Landfill Inspection Results

The Pit 8 Landfill was inspected quarterly during 2008. Animal burrows were observed.

3.2.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester 2008 and none was found.

3.2.5. Maintenance

Some maintenance of the pit cover, including filling of animal burrows, was conducted during the second semester 2008.

3.3. Pit 9 Landfill

3.3.1. Sampling and Analysis Plan Modifications

The sampling and analysis plan for the Pit 9 Landfill ground water Detection Monitoring Program is presented in Table 2.8-3. During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements. There were no modifications made to the plan.

Analytical results and ground water elevation measurements obtained during 2008 are presented in Appendix B and C, respectively.

3.3.2. Contaminant Detection Monitoring Results

All detection monitoring constituents including tritium, HE compounds, VOCs, fluoride, metals, uranium isotopes, and thorium-232 concentrations/activities in samples collected in 2008 from wells upgradient and downgradient of Pit 9 were at or below background concentrations and below regulatory limits.

During 2008, depth to ground water was approximately 110 feet beneath the Pit 9 Landfill. There were no significant changes in ground water elevations from previous semesters. Pit 9 Landfill ground water elevations are presented on Figure 2.8-3.

3.3.3. Landfill Inspection Results

The Pit 9 Landfill was inspected quarterly during 2008. Animal burrows and cracks were observed.

3.3.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester 2008 and none was found.

3.3.5. Maintenance

Some maintenance of the pit cover, including filling of animal burrows, was conducted during the second semester 2008.

4. Risk and Hazard Management Program

The goal of the Site 300 Risk and Hazard Management Program is to protect human health and the environment by controlling exposure to contaminants during remediation. Risk and hazard management is conducted in areas of Site 300 where the exposure point risk exceeded 1×10^{-6} or the hazard index exceeded 1 in the baseline risk assessment.

4.1. Human Health Risk and Hazard Management

The CMP/CP requires that the risk and hazard associated with volatile contaminants in the subsurface migrating upward into indoor and outdoor ambient air and being inhaled by workers be re-evaluated annually using current data.

The on-site worker inhalation risk associated with vapor intrusion from the subsurface into indoor air is discussed in Section 4.1.1. The onsite worker inhalation risk associated with Springs 3, 5, and 7 is discussed in Section 4.1.2.

4.1.1. Vapor Intrusion Inhalation Risk Evaluation

According to the CMP/CP, risk and hazard management will continue for buildings/areas where an unacceptable risk and/or hazard were previously identified until the estimated risk is below 10^{-6} and the hazard index is below 1 for two consecutive years. Risk and hazard management was ongoing in 2008 for the following buildings:

- Building 834D
- Building 830
- Building 833

The risk and hazard calculated for volatile contaminants in the subsurface migrating upward into indoor ambient air of these buildings and being inhaled by onsite workers was re-evaluated in 2008 as described below. Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during 2008 to prevent unacceptable exposure to contaminants during remediation for those buildings and areas that continue to show an unacceptable risk and/or hazard.

Inhalation risk and hazard resulting from transport of VOC vapors from ground water to the building foundations and subsequently into indoor ambient air was estimated using the Johnson-Ettinger Model (US.EPA, 2002). The model results were updated to reflect the chemical-specific toxicity criteria referenced in the "Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" (DTSC, 2005).

The following conservative methodology is used in developing the input values for each model. A representative soil column was developed combining the borehole geology information from wells and boreholes that are within a 100 ft radius of the modeled building or site. The resulting soil column was simplified into three strata as input to the Johnson-Ettinger Model by conservatively selecting the most permeable soil types for each stratum. The highest observed ground water elevation at the site was used as the source depth. The highest observed VOC ground water concentration in a well located in close proximity to the building or site being modeled was selected as the source concentration. If the VOC of interest was not detected in any nearby wells, then the highest detection limit was used as the source concentration. For the Johnson-Ettinger Model, site-specific building dimensions were used.

The individual chemical risk, hazard index, and cumulative risk values estimated for the indoor ambient air are reported in Table 4.1-1 for those buildings that were evaluated in 2008.

Generally the concentrations of VOCs in wells show a declining trend, specifically in areas where there are ground water and soil vapor treatment systems in operation.

As shown in Table 4.1-1, the estimated risk in 2008 remained above 10^{-6} for the indoor ambient air exposure pathway evaluated at Buildings 834D and 830. The building occupancy restrictions, engineered controls, monitoring, and annual risk evaluations will continue for these buildings in accordance with the CMP/CP. During 2008, active remediation using ground water and soil vapor extraction continued at both locations.

In 2008, the risk evaluation for Building 833 for indoor ambient air showed no human health risk for this exposure pathway. "No Risk" is defined as an individual and cumulative excess cancer risk below 10^{-6} and a hazard quotient below 1. The 2007 evaluation for Building 833 also resulted in no human health risk. However, wells in the Building 833 area were dry in 2007, and as a result, risk was calculated using data collected during a previous year. Because 2007 data were not available, risk and hazard management continued at Building 833 in 2008. Risk evaluation at this site will continue until the estimated risk has remained below 10^{-6} and the hazard quotient has remained below 1 using data collected during two consecutive years.

4.1.2. Spring Ambient Air Inhalation Risk Evaluation

The CMP requires annual sampling of outdoor air above contaminated surface water, when surface water is present to determine VOC concentrations. The following springs were evaluated during the first semester 2008:

- Ambient Air Near Spring 3 in the Building 832 Canyon OU
- Ambient Air Near Spring 5 in the HEPA OU
- Ambient Air Near Spring 7 in the Pit 6 Landfill OU

No surface water or green hydrophilic vegetation was present at Springs 5 and 7 during first semester 2008, therefore no ambient air VOC sampling was performed. Springs 5 and 7 have been devoid of surface water or green hydrophilic vegetation since monitoring began in 2003. These springs will be monitored for the presence of surface water or green hydrophilic vegetation in 2009 and air samples will be collected if present.

Ambient air samples were collected at Spring 3 during the first semester 2008. The results were presented in the first semester 2008 CMR (LLNL, 2008). Since no contaminants were detected above their respective Industrial Air Screening Levels (SLs), no risk or hazard to onsite workers exists. However, to meet the requirements of the CMP, air monitoring will continue in 2009 until the estimated risk is below 10^{-6} and the hazard index is below 1 for two consecutive years. No workers currently inhabit the area around Spring 3 except during semiannual sampling.

4.2. Ecological Five-Year Review

An ecological five-year review was performed as outlined in the 2002 CMP/CP to evaluate changes in contaminant and ecological conditions in OUs 2 through 8 as part of the ecological risk and hazard management measures developed to meet Remedial Action Objectives (RAOs) for environmental protection. For purposes of discussion, this section includes evaluations for the period from 1999 to 2007 although referred to as the ‘five year’ ecological review. The objectives of the review are to:

1. Ensure ecological receptors important at the individual level of ecological organization (special status species, i.e., State of California or federally-listed threatened or endangered species or State of California species of special concern) do not reside in areas where relevant hazard indices exceed 1.
2. Ensure changes in contaminant conditions do not threaten wildlife populations and vegetation communities.

To ensure that any changes in contaminant conditions do not threaten ecologically important species or wildlife populations and vegetation communities, DOE evaluated contaminant and ecological conditions in OUs 2 through 8 for the period from the Site Wide Feasibility Study (SWFS) (Ferry et al., 1999) data cutoff date of October 22, 1999 to December 31, 2007. The purpose of this evaluation was to determine if contaminant or ecological conditions have changed sufficiently to warrant re-evaluating the conclusions reached in the baseline ecological risk assessment.

Analytical results for any samples collected in ecologically relevant media (surface soil [≤ 0.5 ft], subsurface soil [> 0.5 ft to 6 ft], and surface water [springs]) were evaluated to identify any new constituents of potential ecological concern or significant increases in concentrations for existing contaminants of ecological concern. Constituents were screened to eliminate those whose concentrations did not exceed established criteria or background concentrations from further evaluation. Wildlife surveys conducted during 1999 to 2007 were also reviewed to identify any new special status species in OUs 2 through 8. Based on the identification of these contaminants and new ecological receptors, exposure pathways were re-evaluated. A revised conceptual site model was developed to address potential exposure to ecological receptors from the constituents of potential ecological concern (COPECs). Hazard quotients were then developed for COPECs if sufficient toxicological information was available.

This section describes the results of the review of contaminant and ecological changes during the review period including:

- A description of the evaluation of changes in contaminant conditions (Section 4.2.1).
- A summary of changes in ecological conditions based on wildlife surveys in conjunction with a review of historical aerial photographs used to evaluate changes in vegetation communities (Section 4.2.2).
- A description of the evaluation of changes in potential exposure pathways (Section 4.2.3).
- The re-evaluation of ecological risk and hazard (Section 4.2.4).

The results of this ecological review were used to determine if modification of the ecological risk and hazard management program in the revised CMP/CP (Dibley et al., 2009 [draft]) were needed to achieve RAOs for environmental protection (Section 4.2.5).

The results of the annual risk re-evaluations for ecological contaminants of concern and receptors specified in the 2002 CMP/CP and reported in previous annual CMRs are not included in this section, but are reported in the 2009 revised CMP/CP.

4.2.1. Evaluating Changes in Contaminant Conditions

To assess changes in contaminant conditions, DOE evaluated analytical data for ecologically relevant media collected during the review period for: (1) significant changes in COC concentrations, and (2) the presence of previously undetected constituents (Section 4.2.1.1). Section 4.2.1.2 describes the process used to screen COCs and newly detected constituents and locations that do not pose ecological risks so that subsequent ecological evaluations focused on the most ecologically relevant issues. Figure 4.2-1, as presented in the 2002 CMP/CP (Figure 6-11), shows the risk management process used to evaluate changes in contaminant conditions.

4.2.1.1. Identification of Significant COC Concentrations Changes and New Constituents

For COCs historically present in surface soil, subsurface soil (to a depth of 6 ft) and surface water (springs), maximum concentrations detected within the evaluation period were compared to historical maxima. Any COC whose maximum concentration detected during the review period exceeded its historical maximum concentration by 50% was retained for further evaluation. Any new constituent detected in the review period dataset, that had not been previously analyzed for or detected, was also included in the evaluation. For any newly detected constituent, the literature was reviewed to determine its ecological significance (Section 4.2.3). In addition, the significance of the areal extent of the contamination was evaluated. Table 4.2-1 presents the results of this evaluation and identifies any existing COCs with current maxima exceeding historical maxima by 50% and new constituents in surface soil, subsurface soil, and surface water, respectively that were carried forward for further evaluation.

4.2.1.2. Screening Evaluation

A screening evaluation was conducted to assess potential ecological effects of COCs with current maxima exceeding historical maxima by 50% and for new constituents in ecologically relevant media in OUs 2 through 8. The screening evaluation was not intended to yield definitive estimates of ecological risk, but rather to rapidly identify and screen out constituents, pathways, and areal locations with OUs that clearly do not pose ecological risks. This process was used to focus subsequent ecological evaluations on the most ecologically relevant issues.

This screening evaluation is consistent with the following guidance:

- Framework for Ecological Risk Assessment (United States Environmental Protection Agency (U.S. EPA, 1992).
- Ecological Risk Assessment Guidance for Superfund (U.S. EPA, 1997).
- Guidelines for Ecological Risk Assessment (U.S. EPA, 1998).
- The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments (U.S. EPA, 2001).
- Framework for Metals Risk Assessment (U.S. EPA, 2007).

This screening evaluation was conducted using available screening level benchmarks for surface soil, subsurface soil, and surface water as presented in Tables 4.2-2, 4.2-3, and 4.2-4, respectively. Due to the presence of naturally-occurring metals and certain radionuclides in Site 300 soils, metal and radionuclide concentrations were compared to available LLNL Site 300 background concentrations for these constituents presented in the 1999 SWFS. For constituents where screening criteria were not available, alternate benchmarks were used (i.e. regional background concentration).

Toxicity quotients (TQs) were calculated for COCs with current maxima exceeding historical maxima by 50% and for newly detected constituent. The TQ is the ratio of the constituent concentration to the selected screening benchmark. For each COC and new constituent evaluated, the most conservative screening benchmark was used to develop the TQ.

A constituent was identified as a COPEC and retained for further evaluation of ecological significance if its concentration was above site background and the appropriate ecological screening values (TQ > 1). A constituent was not considered a COPEC and did not undergo further evaluation if its concentration was: (1) below both site background and ecological screening values, (2) above ecological screening values but below site background, or (3) above site background but there were no appropriate ecological screening values available. In addition, some new naturally-occurring constituents were detected or analyzed for in surface water at several springs and in surface soil at Building 850 at concentrations that exceeded ecological screening values (Table 4.2-5). However, because no background levels have been established for these constituents and the dataset is extremely limited, these constituents will require further analysis before a determination of potential ecological hazard can be made.

4.2.2. Evaluating Changes in Ecological Conditions

Figure 4.2-2 as presented in the 2002 CMP/CP (Figure 6-12) outlines the process that was used to evaluate changes in ecological conditions at Site 300. To evaluate potential changes in ecological conditions in OUs 2 through 8, all available ecological survey results for Site 300 obtained over the evaluation period (1999 to 2007) were reviewed, noting the presence of any new important species.

This effort included:

1. Evaluating all biological survey data collected (pre-construction survey data, biological monitoring data, surveys conducted for Environmental Impact Report/Environmental Impact Statement [EIR/EIS] preparation) to identify the presence of newly identified species at Site 300.
2. Evaluating all biological survey data collected for changes in the presence and abundance of species over time.
3. Determining the locations and operable units in which newly identified species are likely to reside, as well as those species in which changes in presence or abundance has been observed.
4. Evaluating available aerial photos taken and/or any new vegetation maps to determine gross changes in vegetation communities.

Insufficient information was available from the evaluation period to evaluate changes in ground squirrel and deer population density.

Specifically, the evaluation focused on:

- Species that have special status or are classified as threatened or endangered under the California Endangered Species Act as described in the California Department of Fish and Game (CDFG) Special Animals List (CDFG, 2008),
- Plant or animal species classified as candidate, threatened, or endangered species under the federal Endangered Species Act as described by the Region 8 office of the U.S. Fish and Wildlife Service (USFWS), and

- Rare plants, as described by the California Native Plant Society (CNPS).

The evaluation and identification of new special status species is discussed in Section 4.2.2.1.

Ecological conditions were also evaluated for changes in the presence of new special-status or state or federally listed species and for changes in vegetation communities (Section 4.2.2.2). If sufficient data was available, potential changes in the relative abundance of this same set of species were analyzed. The analysis was further limited to those special-status or state- or federally-listed species that are expected to occur or breed in OUs 2 through 8.

4.2.2.1. Newly Identified Special Status Species

To determine which special-status or state or federally listed species were present or expected to occur or breed (e.g., suitable habitat present) in OUs 2 through 8, DOE consulted the 1999 SWFS to establish a baseline for comparison. If particular species were not discussed or referenced in the 1999 SWFS, the 1994 Site-Wide Remedial Investigation (SWRI) (Webster-Scholten et al., 1994) was reviewed to determine which species may have been present, but not discussed in the 1999 SWFS. Any species observed on Site 300 prior to the preparation of the 1994 SWRI but not discussed in the 1999 SWFS, were assumed to also be present in 1999. Subsequent reports, such as the 2002 CMP/CP, the summary of studies conducted in 2002 for the Final Site-Wide Environmental Impact Statement (SWEIS) (DOE, 2005), as well as the Ecological Review (1999 through 2008) (Patterson et al., 2009 [draft]) (hereafter referred to as the Ecological Review), were also reviewed for information that would indicate which species may have been present in 1999 but not documented in the 1994 SWRI or 1999 SWFS. The Ecological Review was used to determine which special-status or state or federally protected species were present in 2008. DOE supplemented this information with official lists of federal candidate, threatened, or endangered species from the Region 8 USFWS office web site based on a query of the Midway U.S. Geological Survey Quadrangle Map (centered on Site 300) and the surrounding eight quadrangles (Mendenhall Springs, Cedar Mountain, Lone Tree Creek, Tracy, Altamont, Byron Hot Springs, Clifton Court Forebay, and Union Island), which is provided in Appendix E. The CNPS Rare Plant Online Inventory for plant species classified as special-status or rare by one of several CNPS rankings designations in the same nine quadrangles were queried and are provided in Appendix E. CNPS ranks rare plans according to information related to their rarity, endangerment, and distribution on one of the following five lists:

- List 1A – plant species that are presumed extinct in California.
- List 1B – plants that are rare, threatened, or endangered in California and elsewhere.
- List 2 – plants that are rare, threatened, or endangered in California but more common elsewhere.
- List 3 – plants species that more information is required (a review list).
- List 4 – plants that have a limited distribution or are infrequently reported (a watch list).

The CNPS also recently revised their ranking scheme listed above to include a threat code extension whereby the list ranking is followed by a decimal ranking (e.g., List 1A.1) that indicates the degree of endangerment with a higher number indicating more risk of endangerment than a lower number. Threat code extensions are listed below:

- Seriously endangered in California with 20 -80% of occurrences threatened.
- Fairly endangered in California with 20 -80% of occurrences threatened.

- Not very endangered in California with less than 20% of occurrences threatened.

According to the CNPS, List 4 plants are not included in their regular queries for rare plants because they are not consistent with the definition of special-status by CDFG according to their Special Plants List (CDFG, 2009). However, DOE included List 4 plants in this review because the CNPS encourages use of this ranking classification during project evaluations for environmental review.

The information on special-status species in OUs 2 through 8 were summarized, where possible, for comparison of ecological conditions prior to or during the preparation of the 1999 SWFS and current conditions in 2008. Baseline studies, such as the 1994 SWRI, 1999 SWFS, and 2005 SWEIS, either discussed the presence of special-status in general terms in the text without specific locations references or documented the observed or expected occurrence in site-wide data summary tables, which prevents analysis by individual OU. However, the Ecological Review covering 1999 through 2008 presents maps of detections for some species and text references to general features or habitat types within Site 300, which were used to infer which species were known to occur or had the potential to occur by individual OU where applicable. The most recent vegetation community map generated for the Ecological Review was used to determine the location of OU boundaries. To account for the varying level of detail available on individual species occurrences, DOE first presents information on the presence of each species prior to or during the preparation of the 1999 SWFS as a baseline on a site-wide basis due to data limitations, and then summarizes current information for each OU where available. Changes in the presence or absence or relative abundance of special-status species that are known to occur or could potentially occur on Site 300, but not within the OUs in the scope of this CMR, are clearly identified to distinguish species that occur near areas of ongoing investigation or remediation from those that do not.

4.2.2.2. Changes in Species Presence or Abundance

Survey data was evaluated to determine changes in the presence of new special-status or state or federally listed species and for changes in vegetation communities as summarized below.

Plants

DOE focused on four special-status or rare plants, including the federally endangered large-flowered fiddleneck (*Amsinckia grandifloria;* CNPS List 1B.1), big tarplant (*Belpharizonia plumose*; CNPS List 1B.1), diamond-petaled California poppy (*Eschscholzia rhombipetala*; CNPS List 1B.1), and round-leaved filaree (*California macrophylla*; CNPS List 1B.1), and four uncommon plants including the gypsum-loving larkspur (*Delphinium gypsophilum gypsophilum*; CNPS List 4), California androsace (*Androsace elongate acuta*); CNPS List 4), stinkbells (*Fritillaria agrestis*; CNPS List 4), and hogwallow starfish (*Hesperevaux caulescens*; CNPS List 4). All eight plant species were known to occur on Site 300 prior to, or during the preparation of the 1999 SWFS and have been documented onsite since that time. Changes in the presence or absence and relative abundance of these eight plant species on Site 300 are discussed site-wide if specific locations allowing classification by OU were not available. Where specific location information is available, current conditions are summarized for the OUs. Quantitative data on the relative abundance of the first four special-status plants was also reviewed, but such data was not available for the latter four plants on the CNPS Watch List (List 4), nor was location specific data allowing classification by OU.

Populations of big tarplant on Site 300 are widespread, particularly in the northern and southeastern portion of Site 300. Annual monitoring conducted between 2002 and 2006 indicates this species has fluctuated in relative abundance with no clear trends, but potential effects from annual prescribed burning likely play a role. Annual spring census data collected annually since 1998 for the three diamond-petaled California poppy populations indicate variable trends in relative abundance for the original population in the southwestern corner of Site 300, and declining abundance in the second and third populations in the northwestern portion of Site 300. All three populations occur outside the boundaries of the OUs included in the scope of this report. Annual monitoring data collected since 2004 for round-leaved filaree indicates the relative abundance for individuals in fire trails decreased between 2004 and 2008, but that the number of individuals in grasslands increased significantly during the same time period. None of the known populations of round-leaved filaree occur within the boundary of any OU within the scope of this report.

None of the eight special-status plants are currently known to occur within the boundaries of the Building 834 (OU 2), Pit 6 Landfill (OU 3), HEPA (OU 4), Building 832 Canyon (OU 7), or OU 8 (Buildings 801, 833, 845, and 851).

The only special-status plant currently known to occur within the boundaries of OU 5 is the big tarplant, which occurs in small and isolated locations of the central portion of the Pit 7 Complex. DOE has observed a decline of this species in OU 5, but reasons for the decline are unknown. However, there are no surface soil or subsurface soil COCs present in the Pit 7 Complex area that could affect the big tar plant. Both the native and experimental populations of large-flowered fiddleneck occur within and surrounding the immediate vicinity of the Building 854 OU in Drop Canyon. Quantitative data on the relative abundance of large-flowered fiddleneck in Drop Canyon indicates the number of individuals in both the native and experimental populations decreased between the spring of 2000 and spring of 2008. For example, there were 40 individuals in the native population, 45 individuals in the flashing population, and 148 individuals in the fire frequency population in the spring of 2000 compared to 0 individuals in the native population, 7 in the flashing population, and 56 in the fire frequency population in spring 2008. However the large-flowered fiddleneck are not located in areas of contamination in ecologically relevant media in the Building 854 OU.

Invertebrates

DOE evaluated the presence of the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) and potential presence of several federally listed branchipods, including the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and federally endangered longhorn fairy shrimp (*Branchinecta longiantenna*) and vernal pool tadpole shrimp (*Lepidarus packardi*). The presence of valley elderberry longhorn beetles was first identified during surveys in 2002 for the SWEIS. Valley elderberry longhorn beetles were observed onsite in riparian habitat in the east central portion of Site 300 near in Gooseberry Canyon north of Elk Ravine, which is outside the boundary of any OU within the scope of this report. No quantitative data on the relative abundance of this species or more recent data since 2002 were available.

No special-status or state- or federally-listed branchipods were detected either before or after the 1999 SWFS on Site 300. The only change in species presence documented at Site 300 for invertebrates after the 1999 SWFS is the confirmed detection of valley elderberry longhorn beetles. However, none of the known occurrences of the valley elderberry longhorn beetle are within the boundaries of any OU within the scope of this report. Suitable habitat, composed of their host plant (elderberry bushes), has been identified in the HE Process Area OU (4) and the Building 854 OU (6).

Amphibians and Reptiles

The presence of three amphibian species, including the federally threatened California red-legged frog (*Rana aurora draytonii*) and California tiger salamander (*Ambystoma californiense*), and the special-status western spadefoot toad (*Spea Hammondii*) were considered. None of these three species were discussed in the 1999 SWFS, but all three were known to occur on Site 300 prior to the completion of 1999 SWFS according to the 1994 SWRI and Ecological Review. All three species have also been confirmed on Site 300 since the completion of the 1999 SWFS, so no new amphibian species were detected. Quantitative data to compare relative abundance is limited, but visual encounter surveys and incidental observations by LLNL staff indicate the number of known breeding pools for California red-legged frogs increased from 8 pools site-wide in the 1990s to 10 pools, as of the 2008 surveys. The number of known breeding pools for California tiger salamanders also increased from 3 pools site-wide in 2007 to 4 in 2008. No quantitative data is available to assess potential changes in the relative abundance of western spadefoot toads.

The potential presence of four reptile species were considered including the state- and federally-threatened Alameda whipsnake (*Masticophis laterialis euryxanthus*), and three special-status reptiles including the San Joaquin coachwhip (*Masticophis flagellum ruddockii*), California legless lizard (*Anniella pulchra*), and coast horned lizard (*Phyrnosoma coronatum frontale*). Potential habitat for the Alameda whipsnake was discussed in the 1994 SWRI, but this species was known to occur prior to completion of the 1994 SWRI according to the 1999 SWFS. Neither the San Joaquin coachwhip nor the coast horned lizard was discussed in the 1999 SWFS, but both species were known to occur previously according to the 1994 SWRI. However, the presence of the California legless lizard was not documented prior to completion of the 1999 SWFS until 2002, when three individuals were caught in the southwestern portion of Site 300 (DOE, 2005). Therefore, the California legless lizard represents the only new special-status reptile species detected between the completion of the 1999 SWFS and 2008. Quantitative data suitable for assessing potential changes in relative abundance are not available for any of these four reptile species.

The status of these special status amphibians and reptiles with the OUs 2 through 8 are summarized below.

<u>Red-Legged Frogs and California Tiger Salamander</u>

There are no known locations of either red-legged frogs or tiger salamanders or aquatic breeding habitat within the boundary of the Building 834 (OU 2), but this OU contains upland habitat within dispersal distance of confirmed aquatic breeding habitat for both species. The Pit 6 Landfill (OU 3) contains wetland habitat that may provide suitable breeding habitat for red-legged frogs and tiger salamanders, but neither species has been confirmed breeding within this OU. The Pit 6 Landfill OU also contains upland habitat within dispersal distance of known red-legged frog detections in the Drop Canyon drainage immediately west of OU 3. The boundaries of the HEPA (OU 4) contain a known breeding location (Song Pool) for both red-legged frogs and tiger salamanders. There are known breeding locations for both red-legged frogs and tiger salamanders within the Building 850/Pit 7 Complex (OU 5) and the entire OU contains upland habitat within dispersal distance of other known breeding locations outside of the OU boundary. Aquatic habitat is present within the Building 854 (OU 6), Building 832 Canyon (OU 7), and OU 8 areas, but there are no confirmed detections of either red-legged frogs or tiger salamanders in these OUs. However, these OUs contain upland habitat within dispersal distance of confirmed breeding locations for both species.

Western spadefoot toad

Western spadefoot toads have not been recorded within the Building 834 (OU 2), Pit 6 Landfill (OU 3), Building 850/Pit 7 Complex (OU 5), Building 854 (OU 6), Building 832 Canyon (OU 7), or OU 8. This species was recorded in the HEPA (OU 4) at Song Pool prior to 2009, but have not been recorded in this location since then.

Alameda whipsnake

Alameda whipsnakes have not been observed and are not expected to occur in the Building 834 (OU 2), HEPA (OU 4), or Building 832 Canyon (OU 7) due to a lack of suitable habitat. Pit 6 Landfill (OU 3) contains Alameda whipsnake critical habitat, but none have been observed and this species is more likely to occur in the southwestern portion of the site with larger patches of suitable habitat. Although none have been observed, Building 850/Pit 7 Complex (OU 5), Building 854 (OU 6), and the Building 851 portion of OU 8 contain Alameda whipsnake critical habitat.

San Joaquin coachwhip and the California legless lizard

Neither the San Joaquin coachwhip or the legless lizard have been observed or are expected to occur within the Building 834 (OU 2), HEPA (OU 4), Building 850/Pit 7 Complex (OU 5), or Building 832 Canyon (OU 7). Although none have been observed, suitable habitat for both San Joaquin coachwhips and legless lizards is present in parts of the Pit 6 Landfill (OU 3), Building 854 (OU 6), and OU 8.

Coast horned lizard

While the coast horned lizard has not been observed in the Building 834 (OU 2), Pit 6 Landfill (OU 3), HEPA (OU 4), Building 854 (OU 6), Building 832 Canyon (OU 7) and OU 8, these OUs all contain suitable habitat for this species. This lizard has been documented in the vicinity of OUs 2 and 7 and within the Building 850/Pit 7 Complex (OU 5).

Birds

The presence of several special-status raptors known to breed or regularly occur on Site 300, including the golden eagle (*Aquila chrysaetos*), white-tailed kite (*Elanus leucurus*), short-eared owl (*Asio flammeus*), and burrowing owl (*Athene cunicularia*) were considered. The majority of these species were not discussed in the 1999 SWFS, but all were known to occur on Site 300 according to the 1994 SWRI. Location specific information for nesting golden eagles, white-tailed kites, and short-eared owls to facilitate classification by OU is not available. Golden eagles, white-tailed kites, and red-tailed hawks are expected to occur throughout the site, especially in grasslands, and short-eared owls are expected to occur site-wide near wetland habitat surrounded by grasslands. Of the special-status raptors, quantitative data is only available for the burrowing owl on a site-wide basis. Burrowing owls were more numerous in 1999 when 19 pairs were observed site-wide (Ferry et al., 1999) compared to more recent surveys where 3 pairs were detected site-wide in 2002, 4 pairs in 2004, 7 pairs in 2007, and

8 pairs in 2008. No new special-status raptor species were detected between completion of the 1999 SWFS and 2008.

DOE also considered the potential presence of the state endangered willow flycatcher (*Empidonax traillii*), and several special-status species including the tricolored blackbird (*Agelaius tricolor*), loggerhead shrike (*Lanius ludovicianus*), common yellowthroat (*Geothylpis trichas*), grasshopper sparrow (*Ammodramus savannarum*), and yellow warbler (*Dendroica petechia brewsteri*). The willow flycatcher was not documented at Site 300 prior to 2002 when this species was captured at the Elk Ravine banding station in riparian habitat in the east central portion of the site. However, all suitable habitat and confirmed detections of this species are outside the OU boundaries considered in the scope of this report. Neither the tricolored blackbird, yellow warbler, or loggerhead shrike were discussed in the 1999 SWFS, but all three species were known to occur during preparation of the 1994 SWRI. Neither common yellowthroats or grasshopper sparrows were observed during preparation of the 1994 SWRI or the 1999 SWFS, but common yellowthroats were subsequently caught immediately offsite at the Corral Hollow CDFG Ecological Preserve in 2002 and grasshopper sparrows were caught at the Elk Ravine banding station in 2003 outside the boundaries of the OUs included in the scope of this report. Tricolored blackbirds and yellow warblers occur in riparian habitat, and confirmed detections of individuals of both species during the nesting season occurred outside of the OU boundaries included in the scope of this report. Limited quantitative data is available for assessing potential changes in relative abundance for passerines, and the information that is available pertains to loggerhead shrikes and tricolored blackbirds site-wide. In 2002, 18 loggerhead shrike nests were found site-wide compared to 21 site-wide in 2004. In 2002, 835 tricolored blackbird nests were detected in Elk Ravine compared to 577 nests detected in 2003. Therefore, the confirmed detections of willow flycatchers and grasshopper sparrows onsite represent new special-status passerine species documented between the completion of the 1999 SWFS and 2008.

Grasshopper sparrows may occur in the grasslands within the Building 834 (OU 2), Pit 6 Landfill (OU 3), HEPA (OU 4), Building 832 Canyon (OU 7) and OU 8 but have not been documented; loggerhead shrikes have been recorded nesting in these OUs; and burrowing owls may forage in these OUs, but have not been documented breeding at any of these locations.

Grasshopper sparrows are expected to occur in the grasslands within the Building 850/Pit 7 Complex (OU 5) and Building 854 (OU 6), and loggerhead shrikes and burrowing owls have been recorded nesting in these OUs.

Mammals

DOE considered the presence of four mammal species including the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), and the special-status American badger (*Taxidea taxus*), pallid bat (*Antrozous pallidus*), and western red bat (*Lasiurus blossevillii*). The San Joaquin pocket mouse (*Perognathus inornatus inornatus*) was previously considered a special-status species but no longer retains that status, so this species was not considered for this evaluation. Potential dens and suitable habitat for the San Joaquin kit fox were identified in the 1994 SWRI and 1999 SWFS, but this species has not been detected on Site 300 since then despite numerous surveys on the site and in the immediate vicinity. The American badger was not discussed in the 1999 SWFS, but was observed during preparation of the 1994 SWRI, and has been documented since then onsite. If they occur, it would likely be as individuals dispersing through the site in grasslands. Neither special-status bat species was described in the 1999 SWFS, but the pallid bat was expected to occur but not observed during the preparation of the 1994 SWRI. Both species were subsequently positively identified on Site 300 using acoustical surveys in 2002, but both species may have been present prior to the completion of the 1999 SWFS and not detected due to advances in bat survey detection and monitoring methods. Therefore, no new special-status mammal species were conclusively detected between completion of the 1999 SWFS and 2008. No location-specific information regarding detections of the American badger, pallid bat, and western red bat are available to facilitate classification by OU. American badgers are expected to occur site-wide in grassland habitat, and both bat species are expected to occur along riparian drainages with surface water, especially in the east central and southeastern portions of the site outside the boundaries of the OU within the scope of this report.

Vegetation Communities

Potential changes in vegetation communities were qualitatively assessed by comparing vegetation community maps prepared for the 1994 SWRI and the 1999 SWFS with subsequent habitat maps prepared for the 2005 SWEIS and subsequent revisions for the Ecological Review. This comparison is somewhat complicated by an increasing level of detail regarding the resolution of vegetation community mapping and classification scheme used. For example, the vegetation community map prepared for the 1999 SWFS only included blue oak woodland, coastal sage scrub, northern riparian woodland, native grassland, and annual grassland vegetation types. In contrast, the revised vegetation community map prepared for the Ecological Review includes ten additional vegetation or habitat type classifications. As result, a comparison was made of the broad spatial coverage of each major vegetation community type depicted on both the 1999 SWFS or 2005 SWEIS maps and the Ecological Review. Aerial imagery was available for 2003 and 2005, but the resolution was insufficient to see changes in vegetation community composition other than evidence of the annual prescribed burns and the 2005 wildfire that affected the majority of the western portion of Site 300, so no additional comparisons were possible using aerial images.

Compared to the distribution of native grassland communities depicted in vegetation community maps in the 1994 SWRI and the 1999 SWFS, acreage of this community type appears to have decreased over time. For example, the 2005 SWEIS reported that native grassland communities comprised 723 acres of Site 300 in 1986 compared to approximately 481 acres of native grassland according to the Ecological Review. Noticeable changes in the distribution of native grassland communities include the absence of this community in the east central portion of Site 300 south of Elk Ravine compared the mapped distribution in the 1994 SWRI and 1999 SWFS. However, the mapping of native grassland community types for the SWEIS appears to show portion of this vegetation type omitted from prior maps, indicating some of the discrepancy may be due to mapping and classification differences. No other obvious difference in vegetation types are apparent, although acreages by vegetation community type are only available for the Ecological Review, which prevents comparison with prior mapping efforts for most other vegetation community types. Comparison by OU is not possible because information on acreages of vegetation communities by OU is not available and aerial images are not of high enough resolution to permit such evaluations.

4.2.3. Evaluating Changes in Potential Exposure Pathways

The Conceptual Site Model (CSM) presented in the 1999 SWFS was updated to include potential ecological receptors and exposure pathways that had not been previously evaluated. The updated CSM is shown on Figure 4.2-3. Potential ecological receptors that were added include mammals, birds, and amphibians and reptiles. Each of the receptors were chosen to represent key functional groups of ecological receptors that share the same feeding guild in the ecosystem, are taxonomically and/or physiologically similar, and thus have a similar potential for exposure. The previous CSM included mammals and fossorial (burrowing) avian species but did not consider exposure to non-fossorial avian, amphibian, or reptile species, which are known to be present at Site 300. The key functional groups (and representative species) that may use the habitat types at Site 300 include:

- Insectivorous/herbivorous upland bird (e.g., American robin [*Turdus migratorius*], representing the tri-colored blackbird [*Agelaius tricolor*])
- Carnivorous bird (e.g., red-tailed hawk [*Buteo jamaicensis*])
- Insectivorous/carnivorous bird (e.g. burrowing owl [*Athene cunicularia]*)
- Herbivorous/insectivorous mammal (e.g. California ground squirrel [*Otospermophilus beecheyi*)
- Herbivorous mammal (e.g. black tailed deer [*Odocoileus hemionus*)
- Omnivorous mammal (e.g., raccoon [*Procyon lotor*])
- Carnivorous mammal (e.g., kit fox [*Vulpes macrotis*])

These species are expected to be the most highly-exposed wildlife species inhabiting Site 300 and are appropriate surrogates for other species within the same functional group. Table 4.2-6 presents a summary of representative receptors of ecological interest (RREIs) that were used in the evaluation of risk for key species that were indentified in Section 4.2.2 as potentially present in OUs 2 through 8. As shown in Table 4.2-6, some surrogate species were used to represent the various feeding guilds. While amphibians and reptiles were included in the CSM, the evaluation of these receptors is inferred based on the evaluation of potential risks to other organisms such as mammals and birds. A food web model was also used to evaluate potential wildlife exposures through the food chain. COPECs in surface soil with the potential to bioaccumulate through the food chain were evaluated for wildlife exposures through dietary items. The maximum concentration of a constituent retained in the current evaluation was used as the exposure point concentrations in the ecological risk re-evaluation discussed in Section 4.2.4.

Terrestrial wildlife may be exposed directly and/or indirectly, via the food chain, to onsite constituents in surface soil, subsurface soil (for burrowing animals), and surface water. Ingestion of constituents is the primary route of exposure to birds and mammals. Although dermal and inhalation exposures occur, these routes are poorly characterized for most wildlife species and are also expected to be much less important than ingestion. Depending on the wildlife species' feeding guild, food items can include plants, terrestrial invertebrates, amphibians, reptiles, or small birds and mammals. Since some constituents bioaccumulate throughout the food web, concentrations of constituents in prey may be elevated relative to concentrations in soil. Incidental surface soil ingestion may also contribute significantly to wildlife exposures, depending on the wildlife species' feeding habits. Incidental exposure to subsurface soil is considered only for burrowing animals. The following constituents and exposure pathways were included in the risk evaluation.

- PCB 1260 in surface soil; dietary and incidental ingestion of soil (OU 5).
- PCB 1260 in subsurface soil; incidental ingestion of soil only (OU 5).
- Copper in subsurface soil; incidental ingestion of soil only (OU 5).
- Selenium in subsurface soil; incidental ingestion of soil only (OU 5).
- Uranium in subsurface soil; incidental ingestion of soil only (OU 5).

Exposure point concentrations are summarized in Table 4.2-7.

Only surface soil and subsurface soil was considered in the food web model used to calculate hazard quotients (HQs). Constituents in surface water were not included in the model because:

1. The model is based on the impact/ingestion of bioaccumulative chemicals and bioaccumulative chemicals are not found in the water column.
2. Ingestion of surface water is considered an insignificant pathway for RREIs at Site 300 as animals at arid and semi-arid sites acquire most of their water needs from the ingestion of prey (U.S. EPA, 1993).
3. HQs per se are not typically calculated for aquatic species. Instead, Regional Water Quality Control Board aquatic habitat goals, California Toxicity Rule values, or similar criteria are used to evaluate overall impact to aquatic organisms (including aquatic and benthic invertebrates and fish). Therefore, if the TQ is >1 (generated by dividing the criteria by the concentration in surface water at the site), then there is potential risk to aquatic organisms resulting from exposure to this constituent. For several of the chemicals that exceed benchmarks in surface water at Site 300, toxicology data was limited or nonexistent, making further evaluations difficult.

A literature evaluation was performed for constituents if they had previously not been sampled or detected and were identified as potentially ecologically significant, but for which no ecological screening criteria or background values were available. These constituents include ammonia, chloride, nitrate and nitrite nitrogen, perchlorate, and phosphorus (as phosphate and phosphorus). The literature review was conducted to identify toxicological data that could be used to evaluate RREIs for these constituents. Toxicity profiles for these constituents are provided in Appendix F.

4.2.4. Re-evaluation of Ecological Risk and Hazard

The foodweb model and revised CSM were used generate HQs for constituents with a TQ exceeding one and present at concentrations greater than background, if sufficient toxicological information was available. HQs were calculated by dividing the estimated dose of a given constituent to each wildlife receptor by the corresponding Toxicity Reference Value (TRV) to yield a quotient. If the value of the HQ is 1 or below, doses are predicted to be below levels associated with adverse effects. HQ values greater than 1 indicate the need for refined investigation to determine whether adverse effects are indeed likely.

COPECs in surface soil with the potential to bioaccumulate through the food chain were evaluated for wildlife exposures through the diet. PCB 1260 in surface soil at the Building 850 portion of OU 5 was the only constituent evaluated for exposures through the food chain.

Exposures of fossorial species through incidental ingestion of COPECs present in subsurface soil were evaluated for copper, selenium, uranium, and PCB 1260 within the Building 850/Pit 7 Landfill OU (OU 5). The calculated HQs for all constituents evaluated were less than one for the wildlife species with the exception of uranium. The HQ calculated for uranium for ground squirrels was greater than one, indicating that this constituent may pose a risk to this receptor at Pit 7 Complex portion of OU 5.

The procedures for calculating HQs and results for COPECs in surface soil and subsurface soil are presented in Sections 4.2.4.1 and 4.2.4.2, respectively. As discussed in Section 4.2.3, HQs are not typically calculated for aquatic species, therefore HQs calculations were not made for surface water COPECs.

4.2.4.1. Surface Soil

The only COPEC identified in surface soil with the potential to bioaccumulate through the food chain, as indicated by a high log octanol-water partition coefficient (Kow) and by the EPA (2000), was PCB 1260. Therefore, PCB 1260 was evaluated for potential effects to terrestrial wildlife.

Because dietary exposures to bioaccumulative compounds dominate wildlife exposures and potential risks (Moore et al., 1997; 1999), such dietary exposures are the primary focus of this screening evaluation for wildlife. Modeled dietary intake of PCB 1260 by three representative avian species and four representative mammalian species are compared to doses reported in the literature as thresholds for adverse effects on survival or reproduction.

The assessment endpoints for this evaluation consisting of representative avian and mammalian species include American robins (Turdus migratorius), burrowing owls (Athene cunicularia), red-tailed hawks (Buteo jamaicensis), California ground squirrels (Otospermophilus beecheyi), black-tailed deer (Odocoileus hemionus), raccoons (Procyon lotor), and kit foxes (Vulpes macrotis). These species are expected to be the most highly-exposed wildlife species potentially inhabiting the Site. As such, they serve as appropriate surrogates for other species, such as the tri-colored blackbird or amphibians and reptiles, which may also be present (Table 2.4-6). The evaluation of amphibians and reptiles is inferred based on the evaluation of potential risks to other organisms such as mammals and birds.

The derivation of HQs involves three steps: (1) estimation of doses of COPECs to the wildlife receptors; (2) selection of literature-based effects thresholds for each COPEC (i.e., toxicity reference values or TRVs); and (3) comparison of the calculated doses and the TRVs to yield HQs. These three steps are discussed below.

Estimation of PCB 1260 Doses to Wildlife

For each receptor, total daily intake (TDI) was calculated using the generalized equation:

$$TDI = (Csl \times SIR) + \sum_{i=1}^{n} (Ci \times Pi \times FIR) \times 1/BW \times AUF$$

where:

TDI = total daily intake (milligram per kilogram body weight per day or mg/kg-day)

Csl = maximum concentration in soil (milligram per kilogram or mg/kg)

SIR = soil ingestion rate (kilogram per day or kg/day)

Ci = concentration in each dietary item (mg/kg)

Pi = fraction of diet as item i (unitless)

FIR = food ingestion rate (kg/day)

BW = body weight (kg)

AUF = area use factor

Concentrations of PCB 1260 in the diet (Ci) of robins, owls, hawks, squirrels, deer, raccoons, and foxes were estimated using bioaccumulation factors (BAFs) derived from the literature. In particular, maximum concentrations of PCB 1260 in surface soil were multiplied by applicable BAFs to estimate the concentrations in appropriate prey items (i.e., terrestrial plants, terrestrial invertebrates, and small mammals). Surface soil concentrations were used in this estimation, because prey items are primarily exposed to surface soil and not subsurface soil.

BAFs and the resultant estimated exposure point concentrations (EPCs) are tabulated in Table 4.2-8. The soil to terrestrial plant BAF is estimated based on the compounds' log Kows, according to methods described by the U.S. EPA (2005). Central tendency BAFs developed by Sample et al. (1999) are used to estimate bioaccumulation of PCBs in terrestrial invertebrates. The soil to small mammal BAF is estimated based on compiled soil to small mammal uptake factors for PCBs by several authors (i.e., Blankenship et al., 2005; ARCADIS, 2004; LANL, 2004; Moore et al., 2003; McKee, 1992). Small mammals serve as a surrogate for prey such as amphibians, reptiles, and birds. In all cases, concentrations in prey items are converted to a wet weight basis by assuming 80% moisture in biota (Boese and Lee, 1992).

Pertinent information regarding prey preferences, body weights, and foraging ranges for all wildlife receptors was drawn from the U.S. EPA's (1993) Wildlife Exposure Factors Handbook, Sample et al. (1997), 1994 SWRI ecological risk assessment (, or estimated from the available literature, as specifically noted in Table 4.2-8. Incidental water ingestion is a minimal exposure pathway for wildlife and is not included in this evaluation. Incidental surface soil ingestion, however, may be a significant exposure pathway (e.g., feeding strategies, grooming) and is included in this evaluation for all receptors. For this screening-level evaluation, the area use factor (AUF) is set to the maximum value of 1.0, which is highly conservative in that it assumes that a given receptor obtains all of its food from within the site boundaries.

Soil ingestion rates (SIRs) were obtained from Beyer et al. (1994) and Sample et al. (1997). Beyer et al. (1994) and Sample et al. (1997) present rates of combined sediment and soil ingestion as a percentage of ingested food, on a dry weight basis. For this evaluation, PCB 1260 concentrations and ingestion rates for soil are presented on a dry weight basis, but for wildlife food items, these parameters are presented on a wet weight basis. Therefore, for the purpose of calculating soil ingestion rates, the food ingestion rates described above are multiplied by a wet to dry weight conversion factor of 0.2 prior to applying the soil intake rates developed by Beyer et al. (1994).

FIRs for wildlife receptors are calculated based on their metabolic rate and the metabolic energy provided by their prey, as described in U.S. EPA (1993) and as shown in the following equations:

$$FIR = NIR_{total} \times BW \times 0.001$$

where:

NIR_{total} = total normalized ingestion rate (g/kg-day); and

$$NIR_{total} = \frac{NFMR}{\sum (P_k \times ME_k)}$$

where:

NFMR = normalized free-living metabolic rate of predator (kcal/kg-day);

Pk = proportion of diet of kth prey item (unitless); and

MEk = metabolic energy of kth prey item (kilocalorie per gram [kcal/g] wet weight); and

$$ME = GE \times AE$$

where:

GE = gross energy (kcal/g wet weight), and

AE = assimilation efficiency (unitless).

The derivation of FIR values for all wildlife receptors is provided in Table 4.2-9.

Total daily intake of incidentally ingested soil was calculated using a modification of the TDI equation above:

$$TDI = (Csl \times SIR)\ x\ 1/BW \times AUF$$

where:

TDI = total daily intake (milligram per kilogram body weight per day or mg/kg-day)

Csl = maximum concentration in soil (milligram per kilogram or mg/kg)

SIR = soil ingestion rate (kilogram per day or kg/day)

BW = body weight (kg)

AUF = area use factor

The derivation of TDI values for all wildlife receptors is provided in Tables 4.2-10a and 4.2-10b.

Wildlife PCB Toxicity Reference Values

Toxicity reference values (TRVs) are the measures of effects used to evaluate responses of wildlife to COPECs. Both no observed adverse effect levels (NOAELs) and lowest observed adverse effect levels (LOAELs) are identified from appropriate literature references, with preference given to peer-reviewed primary sources. NOAELs are generally most appropriate for use in calculating screening HQs, because screening evaluations are intentionally and inherently conservative. Relatedness of test species, effects evaluated, type of endpoint, duration of dosing period, dose administration method, chemical form tested, and study documentation are criteria that are applied in selecting applicable studies.

Dahlgren et al. (1972) evaluated egg hatchability in ring-necked pheasants exposed to PCB 1254 for 16 weeks, at doses of 1.8 mg/kg-day and 7.1 mg/kg-day. The higher dose caused reduced production and survival of offspring. At the lower PCB dose, a slight but statistically significant reduction in egg hatchability was noted during one of two trials. However, no significant effects on egg production or chick survival were observed, and the overall number of surviving chicks per hen was actually slightly higher than in the control group. Based on the overall effects on reproductive success, the NOAEL from this study is identified as 1.8 mg/kg-day and the LOAEL is identified as 7.1 mg/kg-day. Since the toxicity of PCB 1260 is less than PCB 1254, these values provide a conservative basis for assessing PCB-related risks to birds for this evaluation.

PCB toxicity values for mammals are developed based on multigeneration studies in which rodents were administered PCB 1254 in the diet. This approach is conservative, because PCB 1254 is considered the most toxic PCB formulation in mammals, and PCB 1260 is assessed in this evaluation. McCoy et al. (1995) observed impaired reproduction in field mice exposed to PCBs at a dose of 0.68 mg/kg-day. While this study provides a conservative LOAEL, a NOAEL was not identified. Therefore, a NOAEL is identified for this evaluation from Linder et al. (1974). These authors observed no adverse reproductive effects in rats administered PCBs at a dose of 0.32 mg/kg-day. The TRVs for all wildlife receptors are provided in Tables 4.2-11a and 4.2-11b.

Calculation of Hazard Quotient

The HQ for PCB 1260 in surface soil was calculated by dividing the estimated dose to each wildlife receptor by the corresponding TRV to yield a quotient. Table 4.2-12 presents the HQ for PCB 1260 in surface soil in the Building 850 portion of OU 5. Based on the maximum surface soil concentration of PCB 1260, conservative estimates of prey PCB 1260 concentrations, and maximum AUFs, an HQ of less than 1 was calculated for all potential receptors in the Building 850 portion of OU 5. Therefore, PCB 1260 does not pose a risk to terrestrial avian and mammalian wildlife.

4.2.4.2. Subsurface Soil

COPECs identified in subsurface soil included copper, selenium, thorium-228, and PCB 1260 at OU 5. Although thorium-228 was identified as COPECs in subsurface soil at Building 850, the sample in which this constituent was detected was actually collected from the sandpile. Similarly, total uranium, uranium-234, -235, and -238 were identified as COPECs in subsurface soil in landfills 3 and 5 at the Pit 7 Complex. However, the samples in which these constituents were detected were actually collected from beneath the landfill cover and consisted primarily of pit waste mixed with soil.

Copper, selenium, uranium, and PCB 1260 were only evaluated for the impact of incidental ingestion of soil by burrowing animals from, for example, grooming of fur that has contacted the soil. Because copper, selenium, and uranium were not found in surface soil, these constituents would not accumulate in dietary items. As discussed above, dietary exposures to bioaccumulative compounds dominate wildlife exposures and potential risks. An HQ was not calculated for thorium-228 because this constituent does not bioaccumulate.

Uranium is unique in that it consists of a number of radioactive isotopes including uranium-233, -234, -236 and -238. For Site 300, each uranium isotope was reported in pCi/g, which was converted to mg/kg for comparison to available toxicity benchmarks. To calculate the maximum uranium concentration in mg/kg, the maximum value of each isotope was converted from the reported units of pCi/g to mg/kg and then the concentrations of all isotopes were summed resulting in the maximum total uranium concentration included in the risk evaluation.

Table 4.2-12 presents the calculated screening-level HQs for the incidental ingestion of subsurface soil by the burrowing receptors (kit fox, ground squirrel and the burrowing owl). Based on the maximum subsurface soil concentration of copper, selenium, and PCB 1260 at Building 850, conservative estimates the amount of soil incidentally ingested by the burrowing animals of concern, and maximum AUFs, copper, selenium and PCB 1260 do not pose a risk to terrestrial avian and mammalian wildlife. The HQ calculated for uranium for ground squirrels indicates that this constituent may pose an ingestion risk to this receptor at the Pit 7 Complex landfills 3 and 5. However, a mean value or an upper confidence limit (UCL) of the mean (i.e. 95% UCL) is a better estimate of overall exposure to wildlife populations. Substituting the mean (or 95% UCL) for the maximum concentration of uranium in the model results in HQs well below the threshold limit of 1.

4.2.5. Ecological Risk Re-evaluation Summary and Recommendations

Table 4.2-13 summarizes new COCs identified in ecologically relevant media as a result of the ecological risk re-evaluation process. This designation was based on evaluations indicating that the TQs and/or HQs are greater than one, and the constituent concentrations are above site background. Constituents that present no ecological hazard based on evaluations indicating that TQs and/or HQs are less than one, and are below site background are listed in Tables 4.2-2, 4.2-3, 4.2-4 and 4.2-13. The results of this ecological review were used to determine if modification of the ecological risk and hazard management program in the revised CMP/CP (Dibley et al., 2009 [draft]) were needed to achieve RAOs for environmental protection.

A TQ greater than one were identified for the adsorption of thorium-228 in the Building 850 sandpile by ground squirrels, burrowing owls, and kit fox at Building 850. Excavation and remediation of the sandpile is currently underway as part of the Building 850 Soil Removal Action, thereby mitigating this ecological risk. Therefore, no new ecological risk and hazard management measures are required.

In addition, samples of pit waste collected from the Pit 3 and 5 landfills contained uranium-234, -235, and -238 at activities that posed a hazard greater than one if ingested by ground squirrels, burrowing owls, and kit fox. While this area represents potential habitat for burrowing owls and kit fox, neither species has been observed in this area. As part of the inspection and maintenance program for the Pit 7 Complex, the landfills are inspected and any burrows or holes in the cover are filled to prevent animals from being exposed to the pit waste. Therefore, no new ecological risk and hazard management measures are required.

No new ecological hazards were identified that required risk and hazard management measures in any other OU as a result of this review of current ecological and contaminant conditions. However, several naturally occurring substances were detected in several springs and in surface soil at Building 850 above the ecological screening levels. No background concentrations are available in the 1999 SWFS for comparison. Because very few samples were collected and no background concentrations exist, additional data will be collected and the analytes will be evaluated in future CMRs. Table 4.2-7 presents the analytes and media that require further investigation prior to determining if these constituents pose a hazard to ecological receptors.

Modifications to the ecological risk and hazard management program based on the results of the annual risk re-evaluations for ecological contaminants of concern and receptors specified in the 2002 CMP/CP were evaluated and identified in the 2009 revised CMP/CP.

5. Data Management Program

The management of data collected during second semester 2008 was subject to the Environmental Restoration Department (ERD) data management process and standard operating procedures (Goodrich and Wimborough, 2006). This data management process tracks sample and analytical information from the initial sampling plan through data storage in a relational database. As part of the standard operating procedures for data quality, this process includes sample planning, chain-of-custody tracking, electronic and hard copy analytical results receipt, strict data validation and verification, data quality control procedures, and data retrieval and presentation. The use of this system promotes and provides a consistent data set of known quality. Quality assurance and quality control are performed consistently on all data.

5.1. Modifications to Existing Procedures

During the second semester of 2008, there were no major changes to the relational database that is used to maintain the data for the CMR or the applications used to access the data. Due to reduced staffing during the reporting period, only general maintenance and minor refinements were implemented to improve chain of custodies, data entry, and querying abilities. Improvements were made to the Self Monitoring Report application to simplify the review and approval process. Sample planning and Chain of Custody Tracking (SPACT) was augmented with Project Costing Implementation (PCI) code improvements and data, chain of custody creation cross references to clean wells requirements for the first time since transition to Oracle, and changes in the turn around time table and the well table. Existing standard operating procedures are being modified to reflect the changes necessitated by the normalization to the Oracle database.

5.2. New Procedures

Due to reduced staffing during the reporting period, no new development was done for the database or applications used to manage the CMR data.

6. Quality Assurance/Quality Control Program

LLNL conducted all compliance monitoring in accordance with the approved Quality Assurance Project Plan (QAPP) (Dibley, 1999) requirements for planning, performing, documenting, and verifying the quality of activities and data. The QAPP was prepared for CERCLA compliance and ensures that the precision, accuracy, completeness, and representativeness of project data are known and are of acceptable quality. The QAPP is used in conjunction with the LLNL ERD Standard Operating Procedures (SOPs), Operations and Maintenance Manuals (O&Ms), workplans, Integrated Work Sheets (IWSs), and Site Safety

Plans. Modifications to existing LLNL quality assurance/quality control (QA/QC) procedures, new QA/QC procedures that were implemented during this reporting period, self-assessments, quality issues and corrective actions, and analytical and field quality control are discussed in Sections 6.1 through 6.6.

6.1. Modifications to Existing Procedures

LLNL Livermore Site and Site 300 Environmental Restoration Project SOPs, Revision 13, is undergoing final review during the signature chain process. Revision 13 consists of updates to Chapters 2 and 5, which cover ground water sampling procedures and data management procedures, respectively. Updated procedures include: SOP 2.1: Pre-sample Purging of Wells, SOP 2.2: Field Measurements on Surface and Ground Waters, SOP 2.3: Sampling Monitor Wells with Bladder and Electric Submersible Pumps, and Specific-Depth Grab Sampling Devices, SOP 2.4: Sampling Monitor Wells with a Bailer, SOP 2.5: Surface Water Sampling, SOP 2.6: Sampling for Volatile Organic Compounds, SOP 2.7: Pre-sample Purging and Sampling of Low-Yielding Monitor Wells, SOP 2.9: Sampling for Tritium in Ground Water, SOP 2.10: Well Disinfection and Coliform Bacteria Sampling, SOP 2.13: Barcad Sampling, SOP 5.1: Data Management Printed Analytical Result Receipt and Processing, SOP 5.3: Data Management Electronic Analytical Result Receipt and Processing for Sample and Analysis Data, SOP 5.4: Data Management Hand Entry of Analytical Results, SOP 5.6: Ground Water Elevation Reports, SOP 5.8: Field Logbook Control, SOP 5.10: Data Management Receipt and Processing of Lithologic Data by Electronic Transfer, SOP 5.14: Issuing New Parameter Codes, and SOP 5.15: Livermore Site Routine Groundwater Sampling Plan Preparation. Two procedures in Chapter 4 have also been updated and are in signature chain: SOP 4.1: General Instructions for Field Personnel and SOP 4.3: Sample Containers and Preservation. Chapter 2 procedures, SOP 2.8: Installation of Dedicated Sampling Devices and SOP 2.12: Ground Water Monitor Well and Equipment Maintenance will not be included in Revision 13, but are scheduled to be included with the next release due to improvements being made to the well and equipment installation tracking process.

6.2. New Procedures

During this reporting period, an activity level work planning and control process was initiated to comply with a best practice and guidance process developed by DOE, based on 48 CFR 970.5223-1, the QA rule (10 CFR 830.120), and DOE Order 414.1C. External assessments and other events at LLNL had also revealed work control deficiencies and the need for a work control process. "Standing Integrated Safety Management (ISM) Work Permits" were developed based on ERD's approved IWSs. Standing Work Permits are a type of work permit designed to cover work that is repetitive in nature, and therefore, is adequate for most of ERD's work activities. An electronic program, similar to the IWS system, is being developed and the work permits will be uploaded to the system as soon as it becomes available.

Other new procedures include the development of the Operations and Maintenance Manual, Volume XVI: O&M Manual for Treatment System at the Pit 7 Complex. The document is currently in the review process and will be finalized and distributed prior to the facility start-up.

6.3. Self-assessments

ERD participates in formal and informal self-assessments. These assessments are used to evaluate work activities to QA and management procedures, and Integrated Safety Management System (ISMS) practices. External regulatory agencies also perform frequent walkabouts during ERD work activities. During this reporting period, there were approximately eleven assessments and walkabouts performed for the ERD Site 300 work activities. Issues and deficiencies observed during the assessments are tracked from inception to resolution using the institutional Issues Tracking System (ITS). To date, all ERD Site 300 work related issues and deficiencies have been successfully corrected and closed-out in the ITS.

6.4. Quality Issues and Corrective Actions

Quality improvement, nonconformance, and corrective action reporting is documented using the Quality Improvement Form (QIF). A total of five QIFs were processed during this reporting period. All quality improvements described on the QIFs were implemented and the QIFs have been successfully closed-out.

6.5. Analytical Quality Control

Data review, validation, and verification are conducted on 100% of the incoming analytical data. Contract analytical laboratories are contractually required to provide internal quality control (QC) checks in the form of method blanks, laboratory control samples, matrix spikes, and matrix spike or sample duplicate results with every analysis. During the data validation process, the analytical QC data and associated QC acceptance criteria (control limits) are reviewed. Data qualifier flags are assigned to analytical data that fall outside the QC acceptance criteria. Data qualifier flags and their definitions are listed in the Acronyms and Abbreviations in the Tables section of this report. The qualifier flags, when they exist, appear next to the analytical data presented in the treatment facility compliance tables of this report. Because rejected data are not used for decision-making, the rejected analytical data are not displayed in the tables, only the "R" flag is presented. Data is qualified as rejected only when there is a serious deficiency in the ability to analyze the sample and meet QC criteria, indicating the inability to verify the presence or absence of an analyte. During this reporting period, "S" flags were assigned to some data points determined to be suspect, as data were more closely scrutinized during the reporting process.

During 2008, uranium analyses were performed by inductively coupled plasma-mass spectrometry (ICP-MS) using two different methods: (1) EPA Method 6020 utilized by a contract laboratory and (2) an LLNL developed state-of-the-art isotope dilution method that provides precise ^{235}U and ^{238}U measurements. EPA Method 6020 is not designed to ensure precise measurement of individual isotopes to attain a $^{235}U/^{238}U$ isotope ratio with the small errors necessary to meet data quality objectives for uranium isotope ratio determination. The majority of ground water samples collected in 2008 were analyzed using EPA Method 6020. Therefore, uranium isotope ratio data are not included in the uranium mass spectrometry data table (Table B-5.5) or the Building 850 area ground water uranium activity maps (Figures 2.5-6 and 2.5-7).

Within this reporting period, subcontracts were set-up with two additional analytical labs. These labs were utilized during this reporting period to perform radiological analyses and organic/inorganic analyses. For QC purposes, collocated samples were submitted to the labs and data comparisons are being made.

6.6. Field Quality Control

Quality control is implemented during the sample collection process in the field. Ten percent of samples are collocated (5% intralaboratory and 5% interlaboratory). Field blanks and trip blanks are used to identify contamination that may occur during sample collection, transportation, or handling of samples at the analytical laboratory. Equipment blanks are used to determine the effectiveness of decontamination processes of portable equipment used for purging and/or sample collection. There were no cross-contamination issues indicated by trip blank, field blank, or equipment blank analyses during this reporting period.

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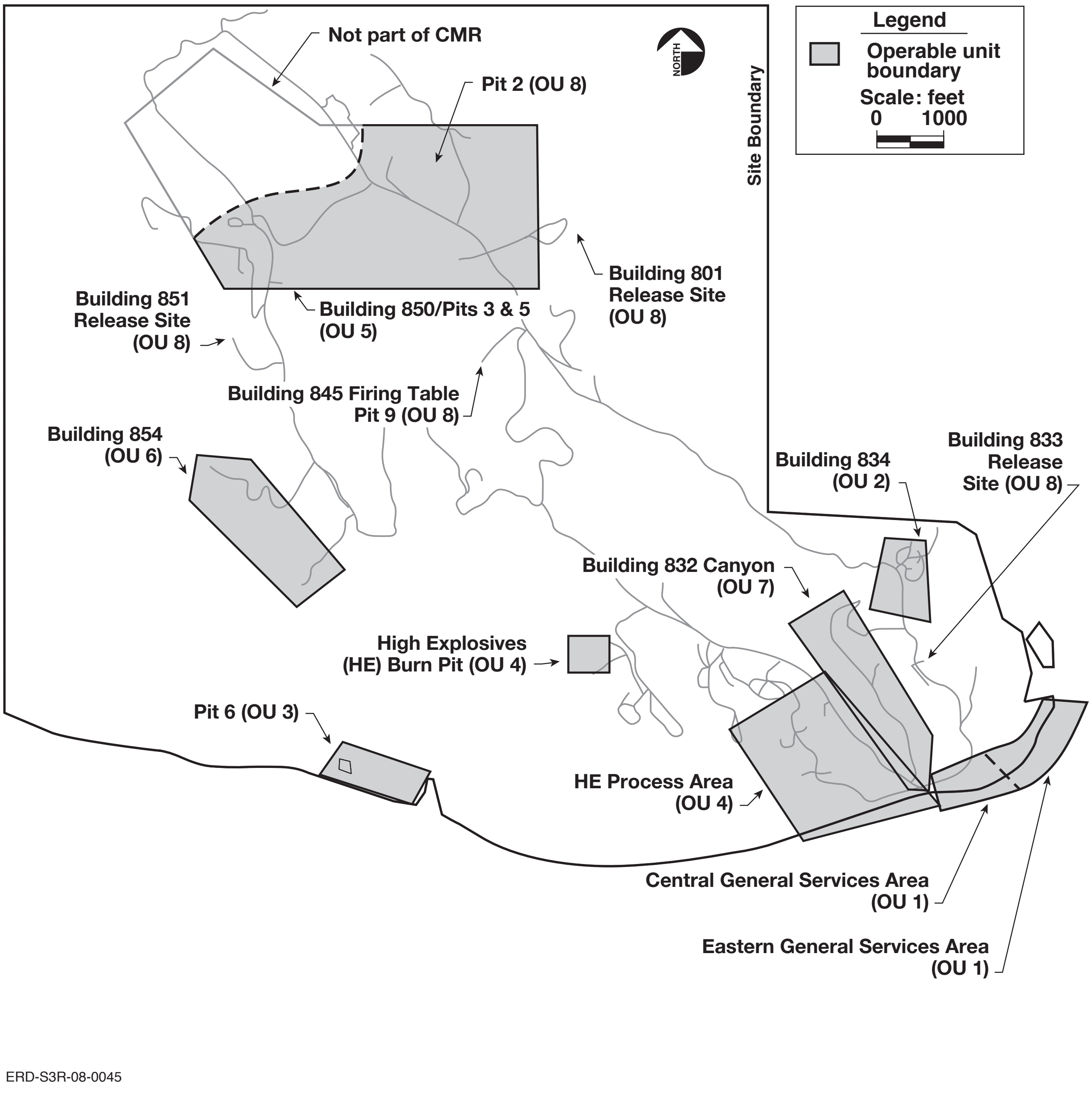


Figure 2-1. Site 300 map showing OU locations.

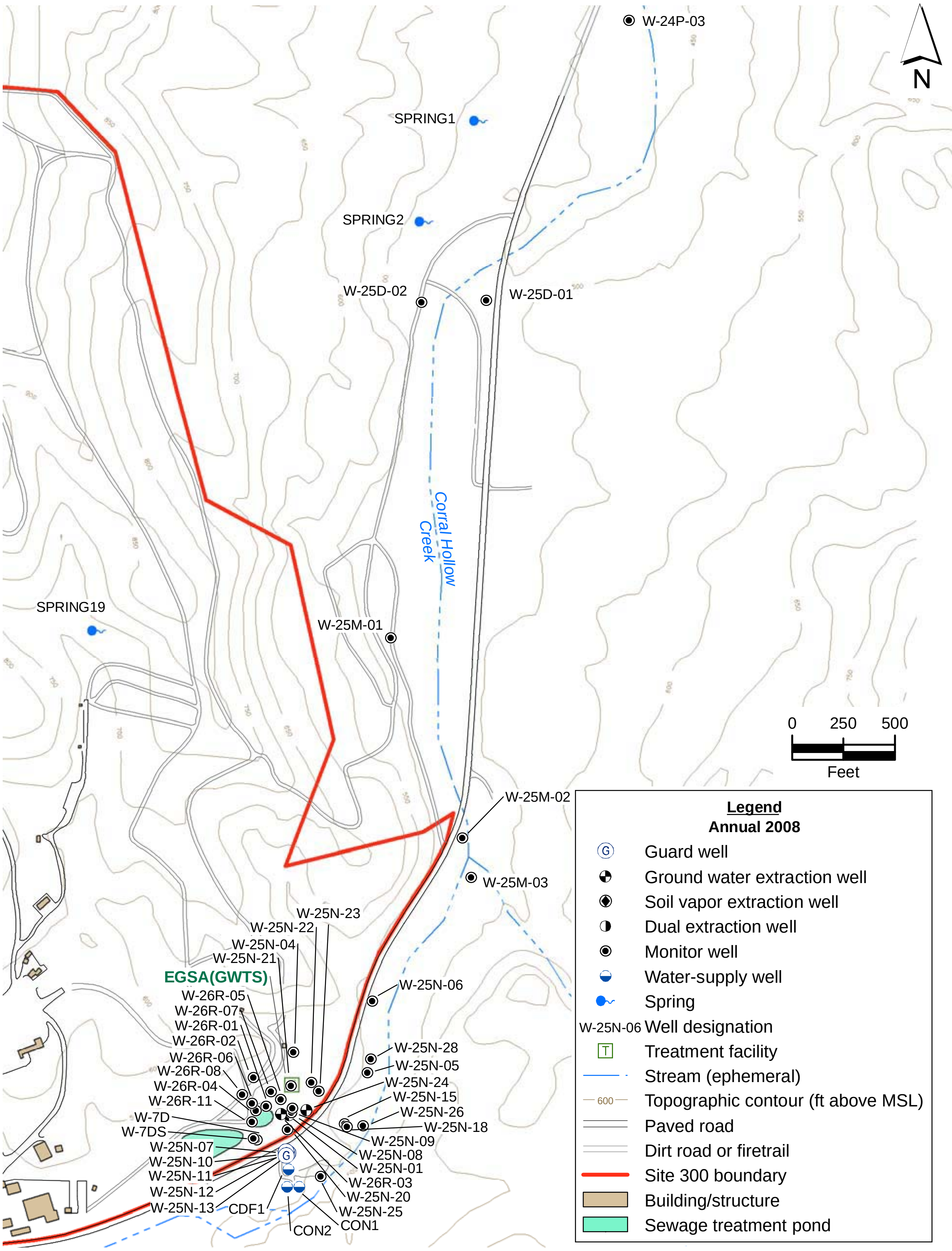


Figure 2.1-1. Eastern General Services Area OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

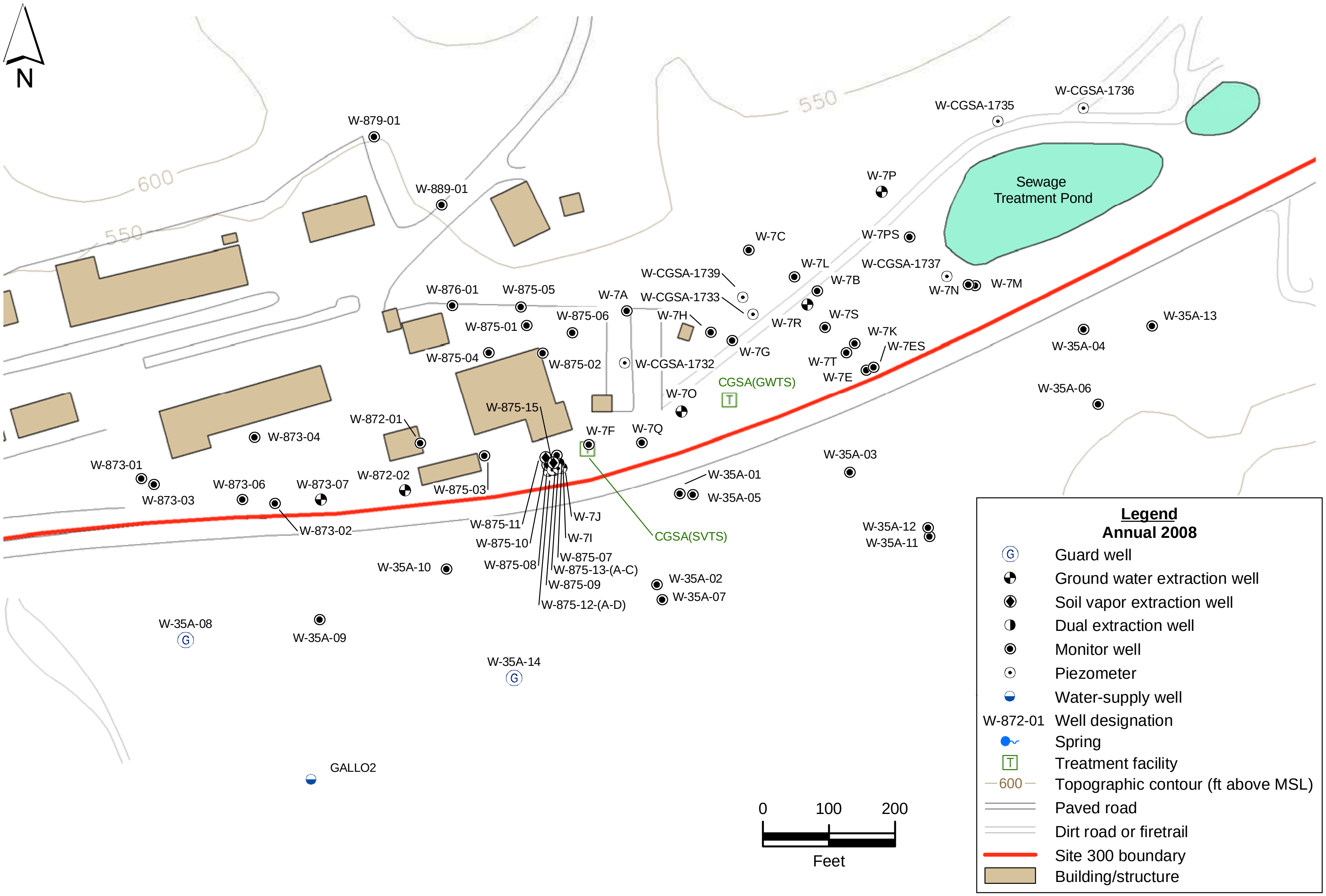


Figure 2.1-2. Central General Services Area OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

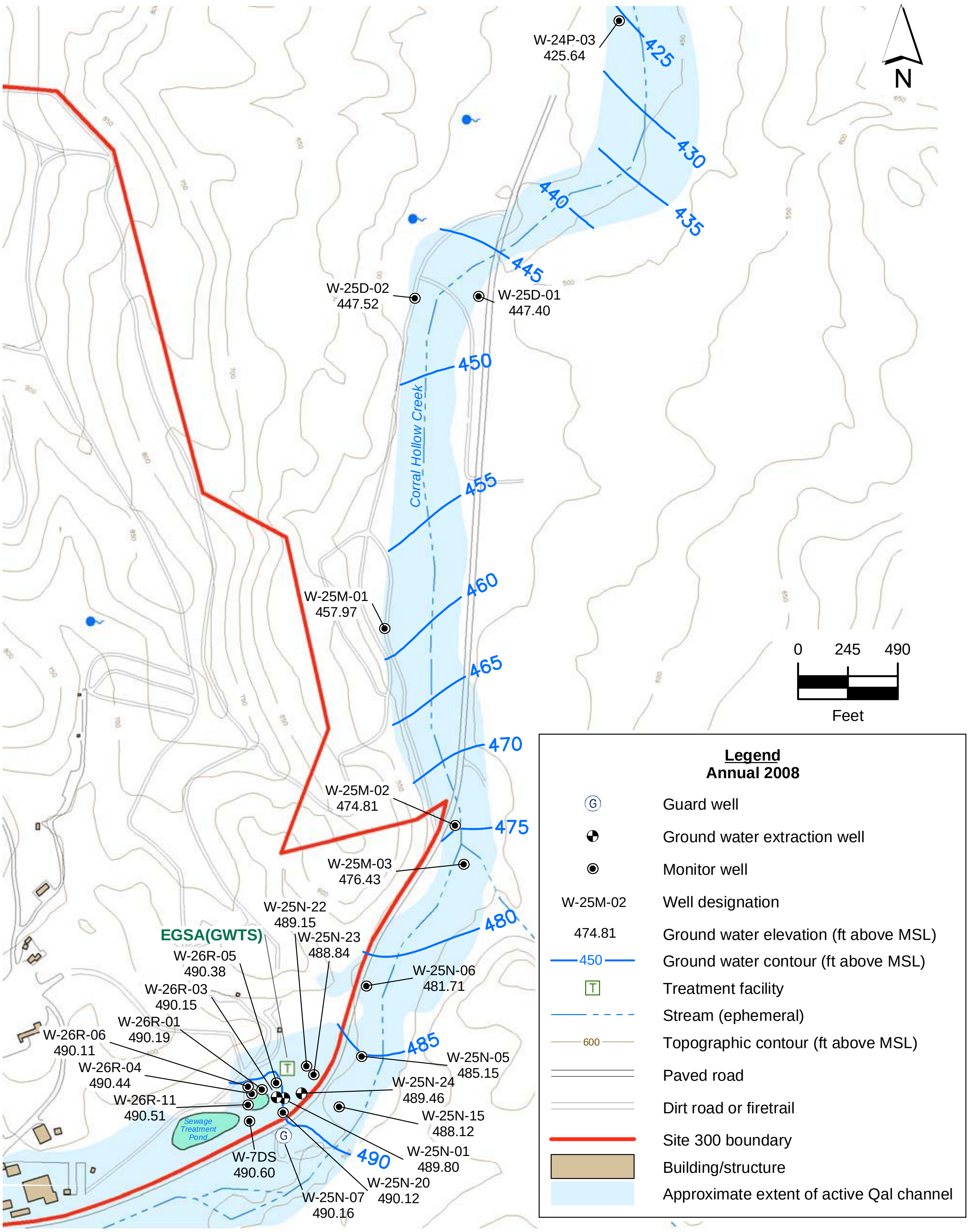


Figure 2.1-3. Eastern General Services Area OU ground water potentiometric surface map for the Qal-Tnbs$_1$ HSU.

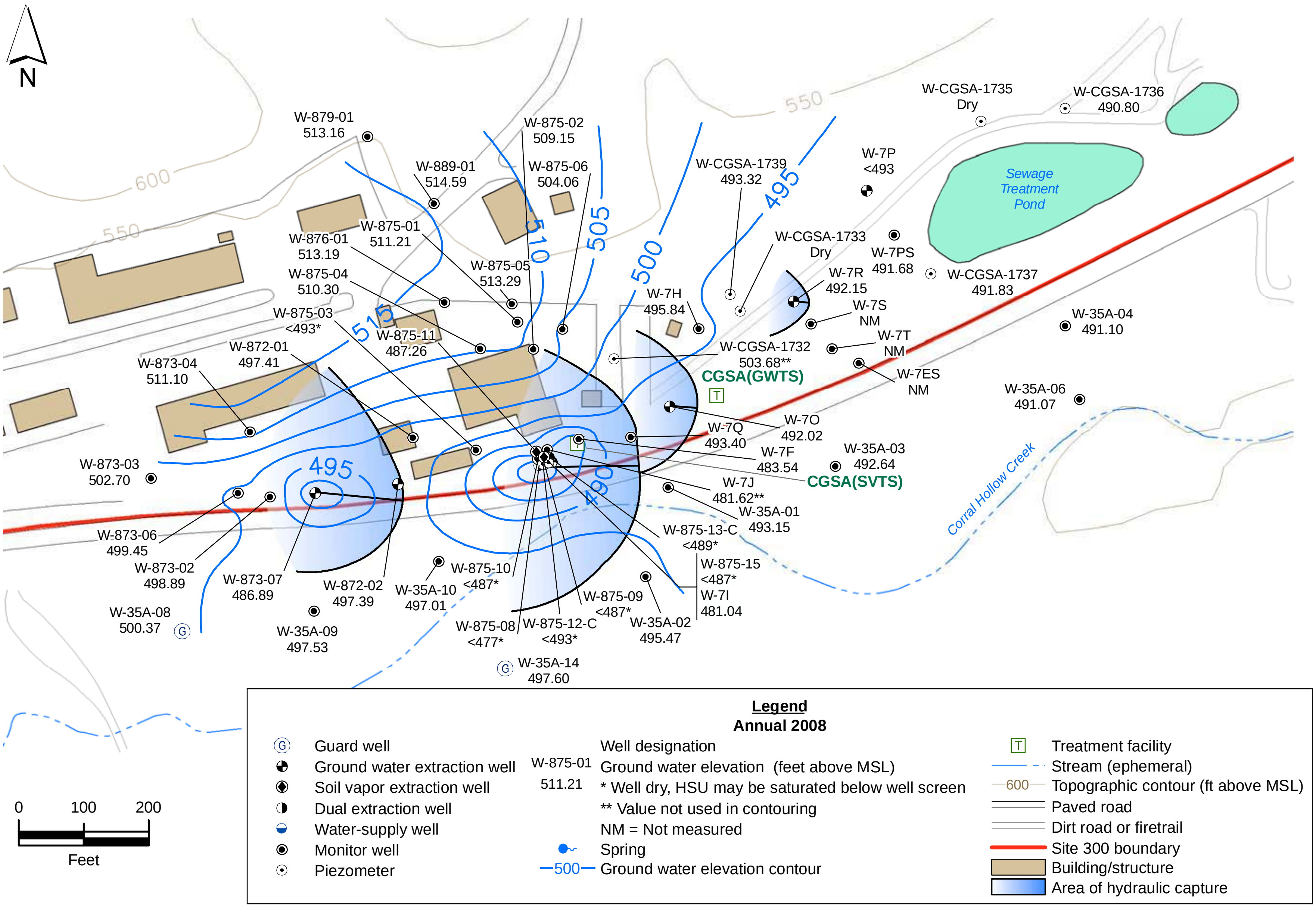
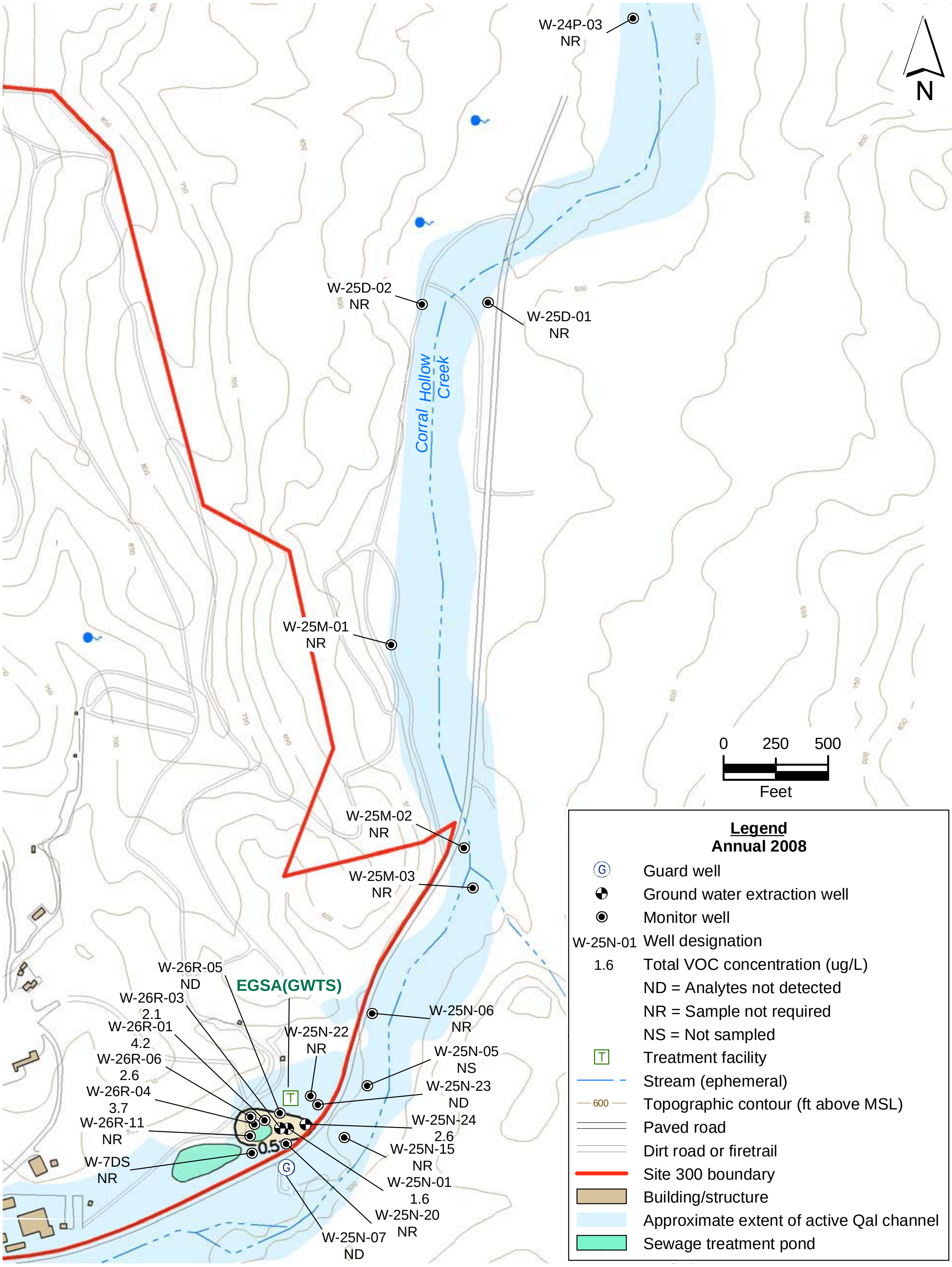


Figure 2.1-4. Central General Services Area OU ground water potentiometric surface map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ HSUs.



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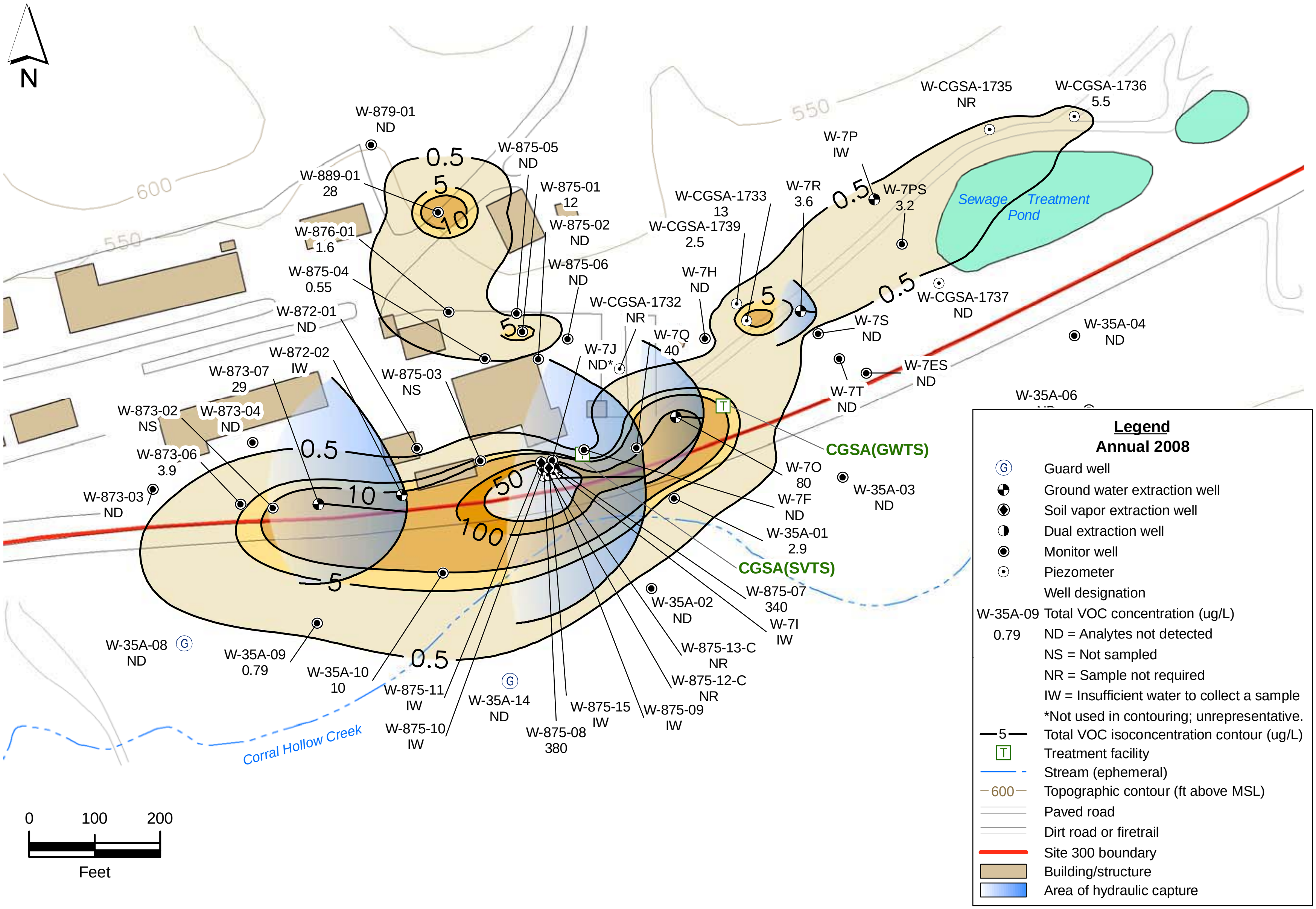
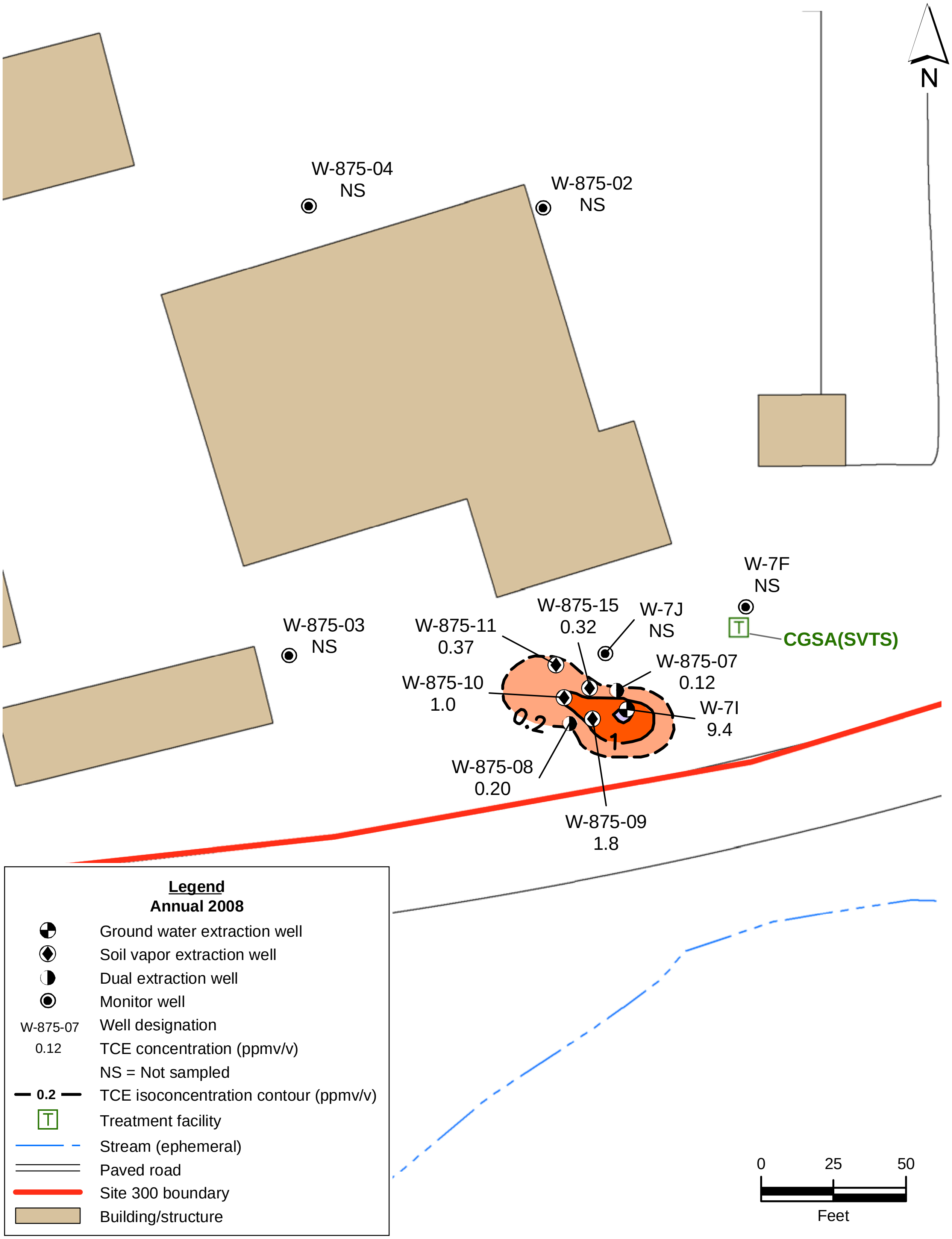


Figure 2.1-6. Central General Services Area OU total VOC isoconcentration contour map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ HSUs.



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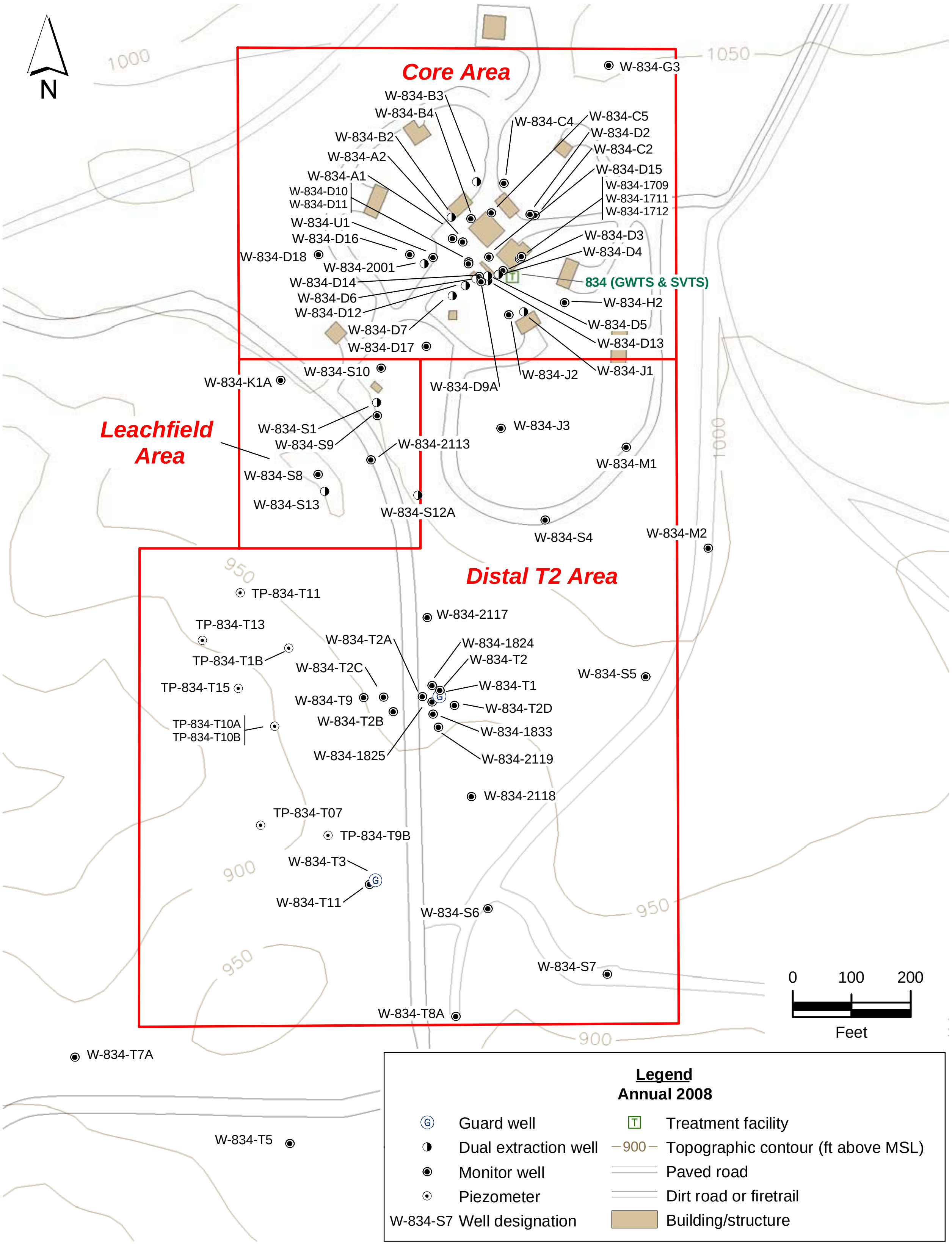
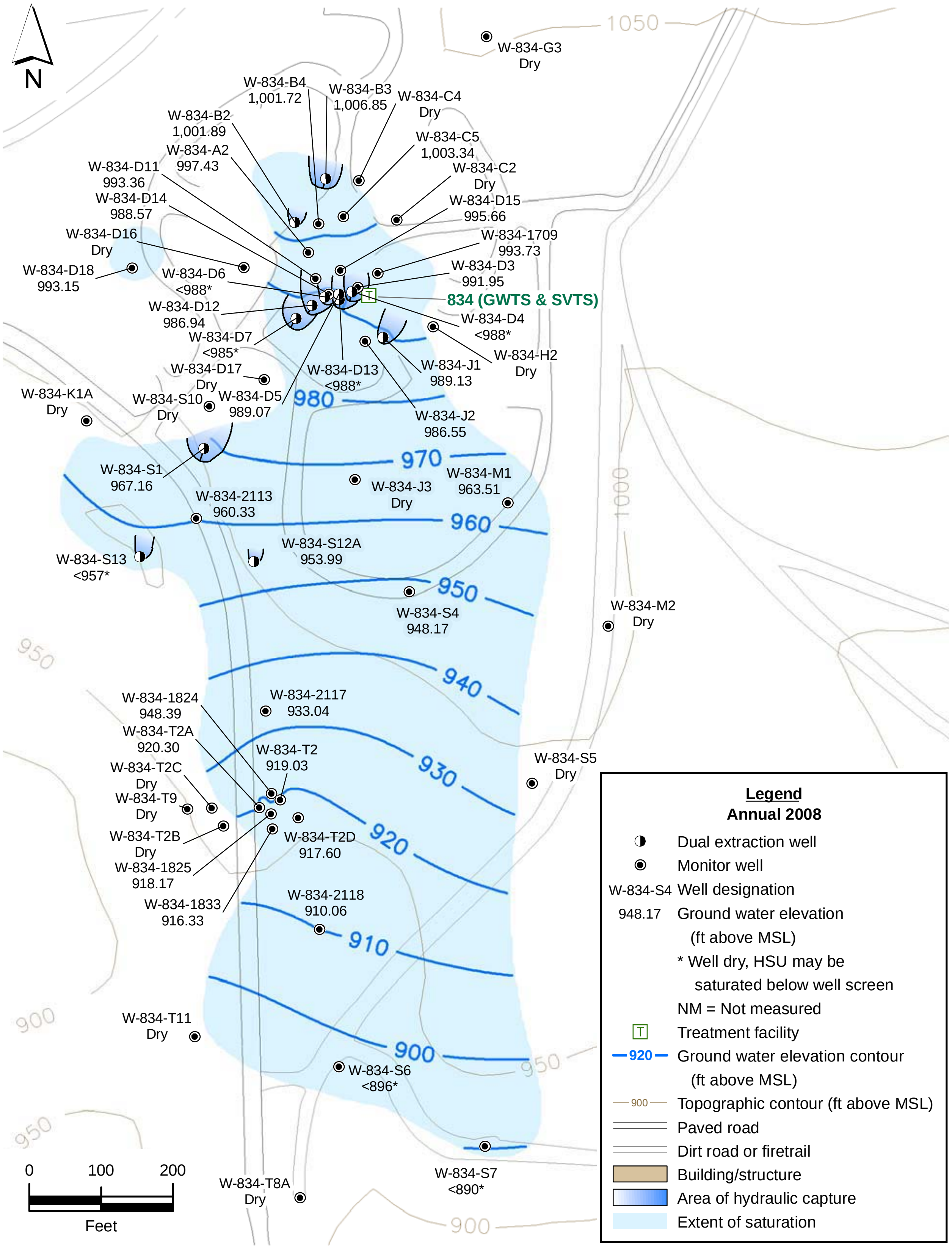


Figure 2.2-1. Building 834 OU site map showing monitor and extraction wells and treatment facilities.



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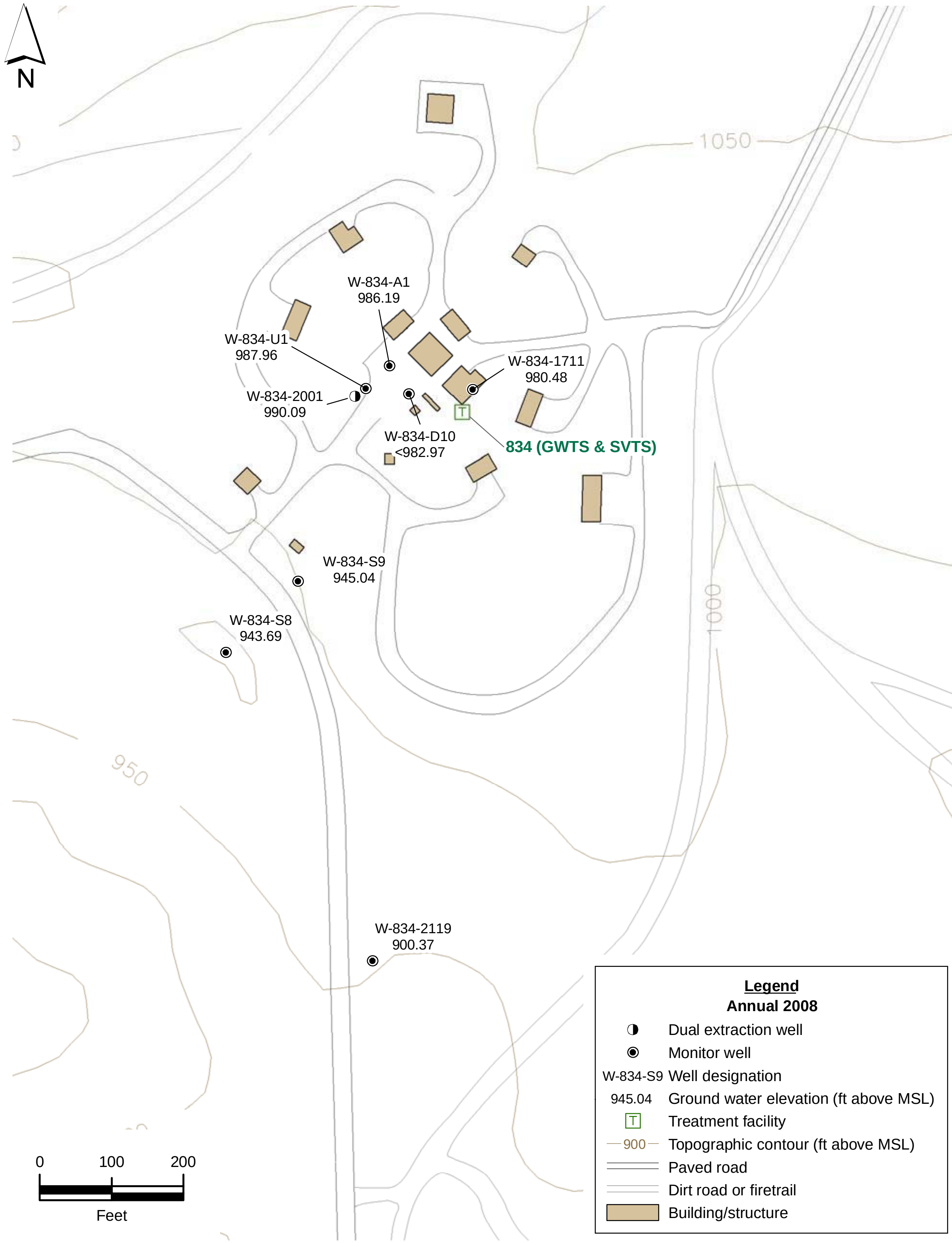

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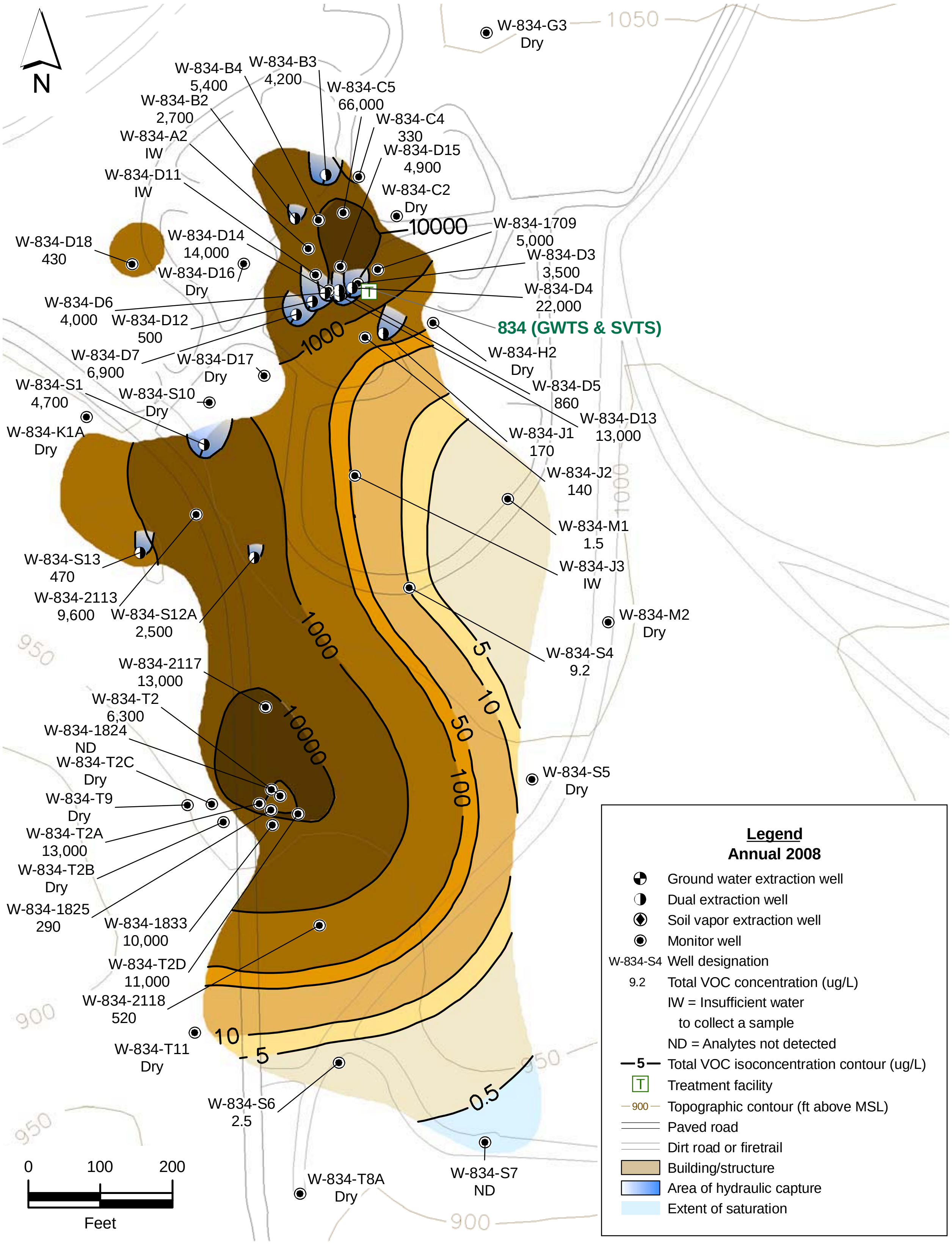


Figure 2.2-4. Building 834 OU total VOC isoconcentration contour map for the Tpsg perched water-bearing zone.

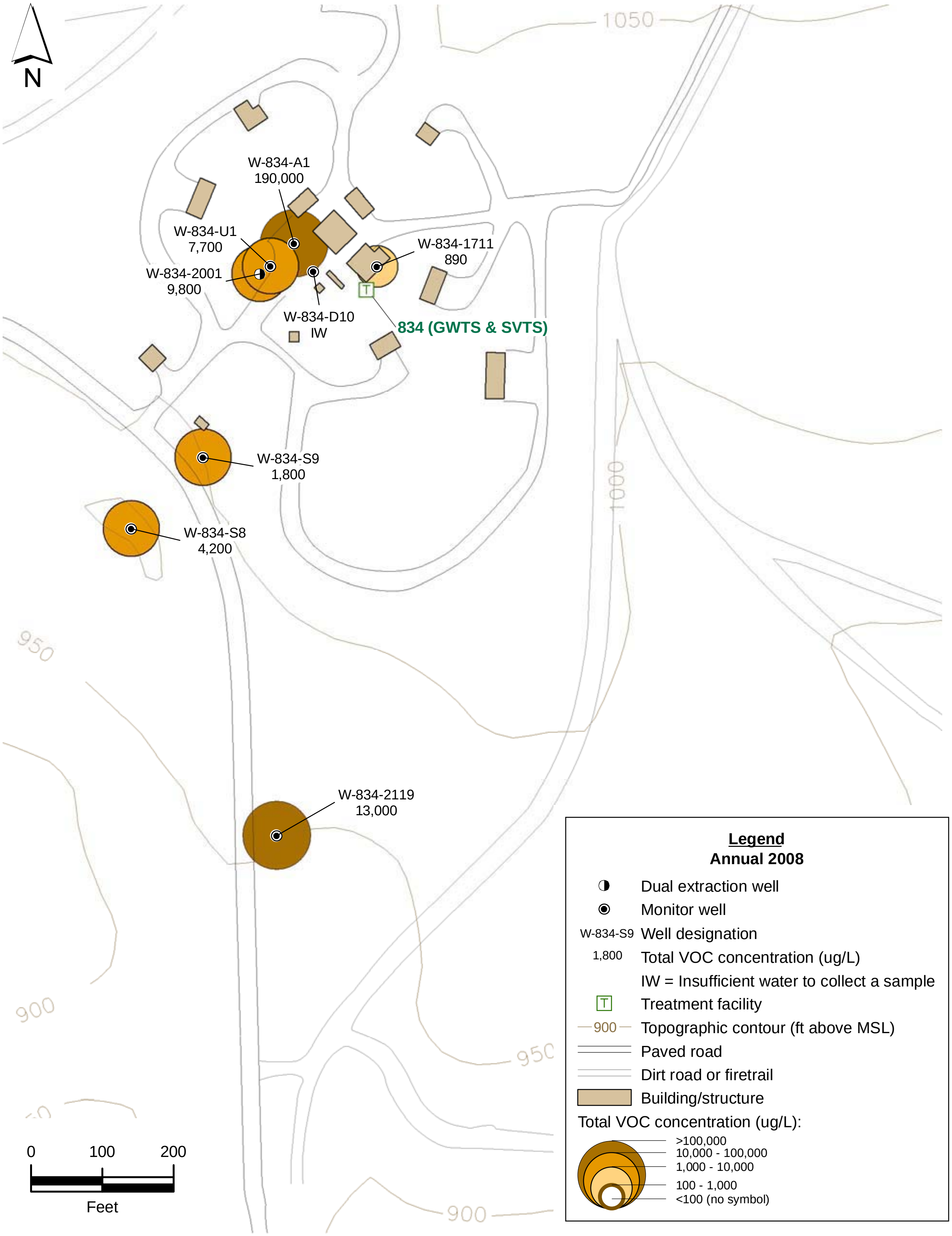
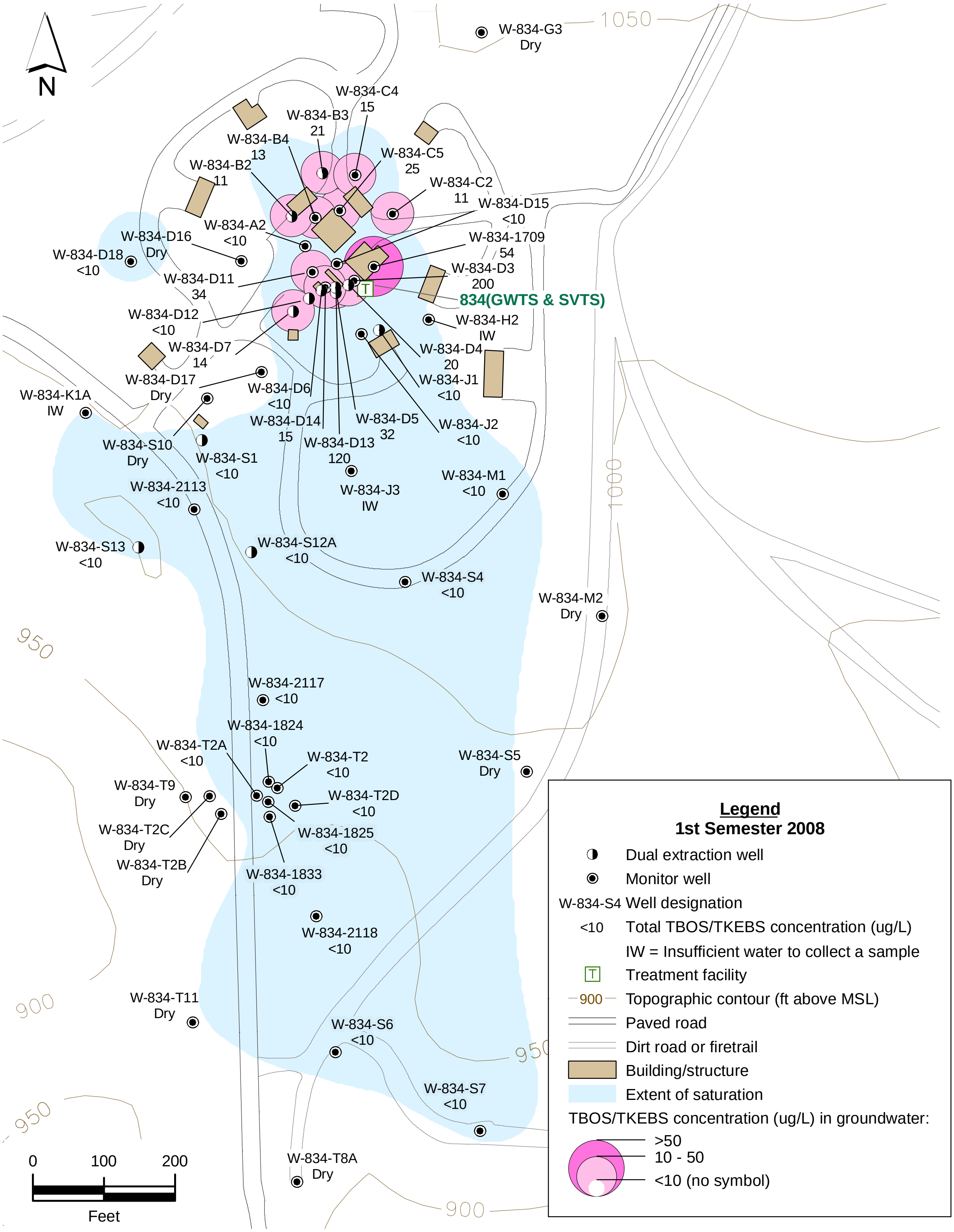


Figure 2.2-5. Building 834 OU map showing total VOC concentrations for the Tps-Tnsc$_2$ HSU.



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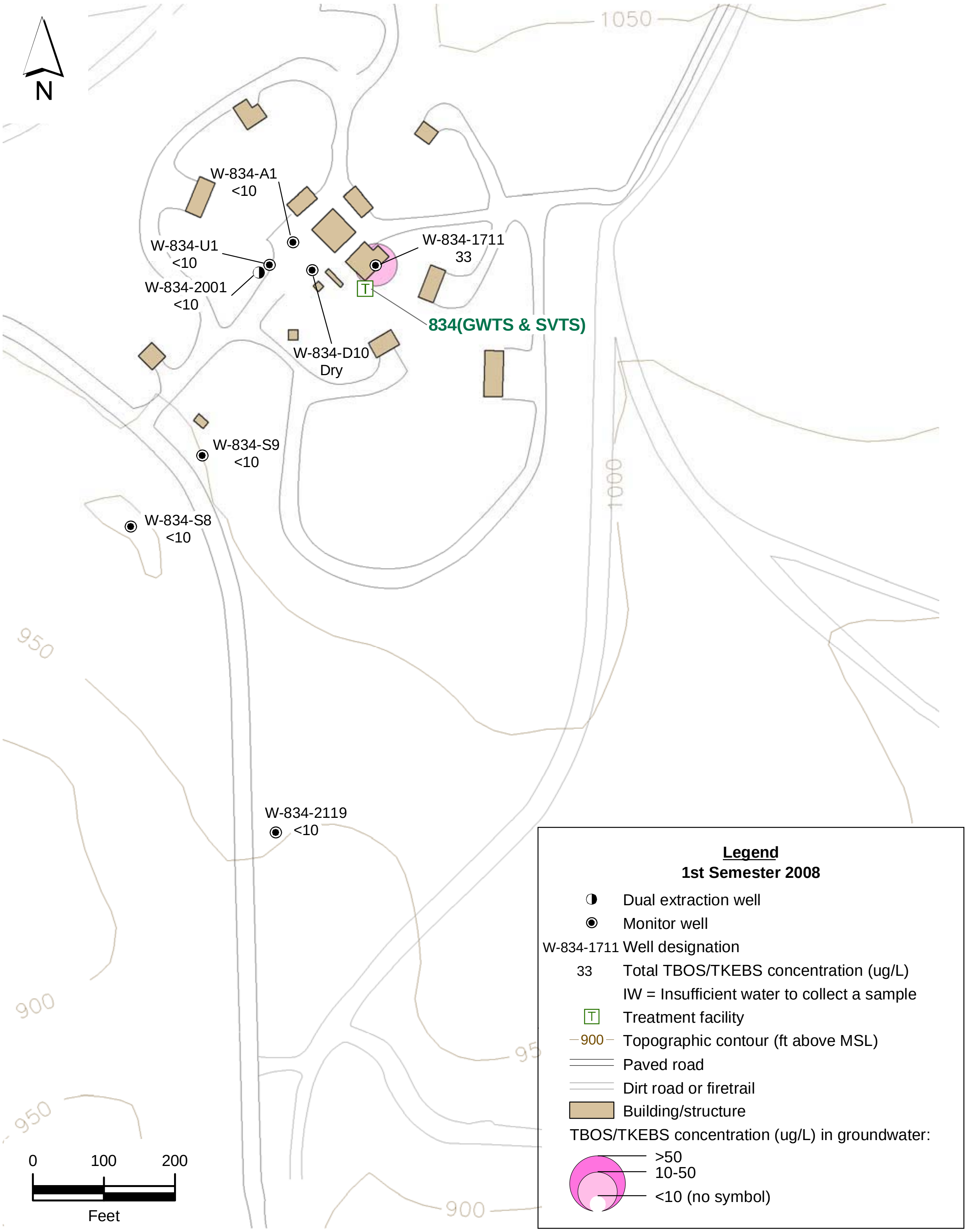


Figure 2.2-7. Building 834 OU map showing TBOS/TKEBS concentrations for the Tps-Tnsc$_2$ HSU.

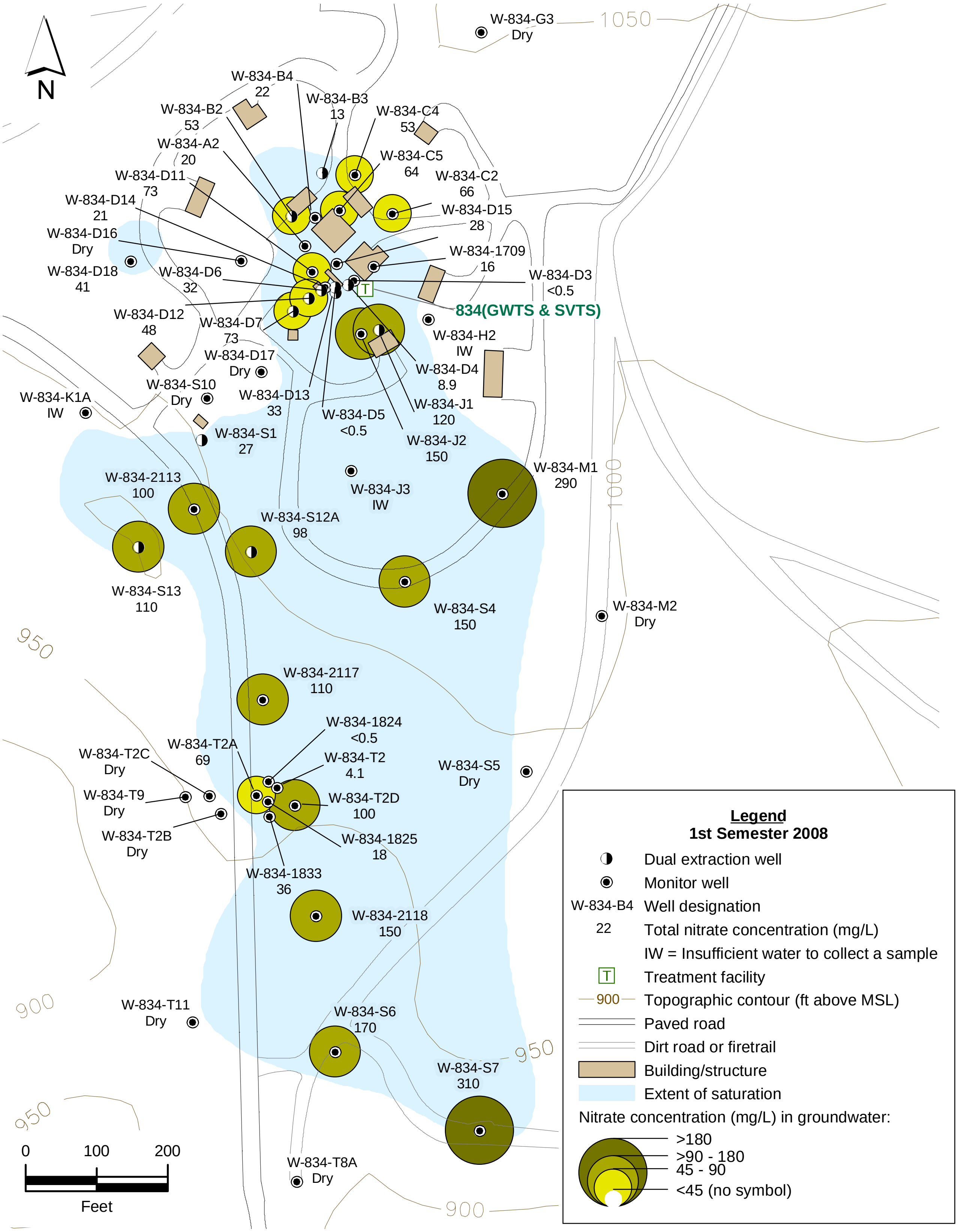


Figure 2.2-8. Building 834 OU map showing nitrate concentrations for the Tpsg perched water-bearing zone.

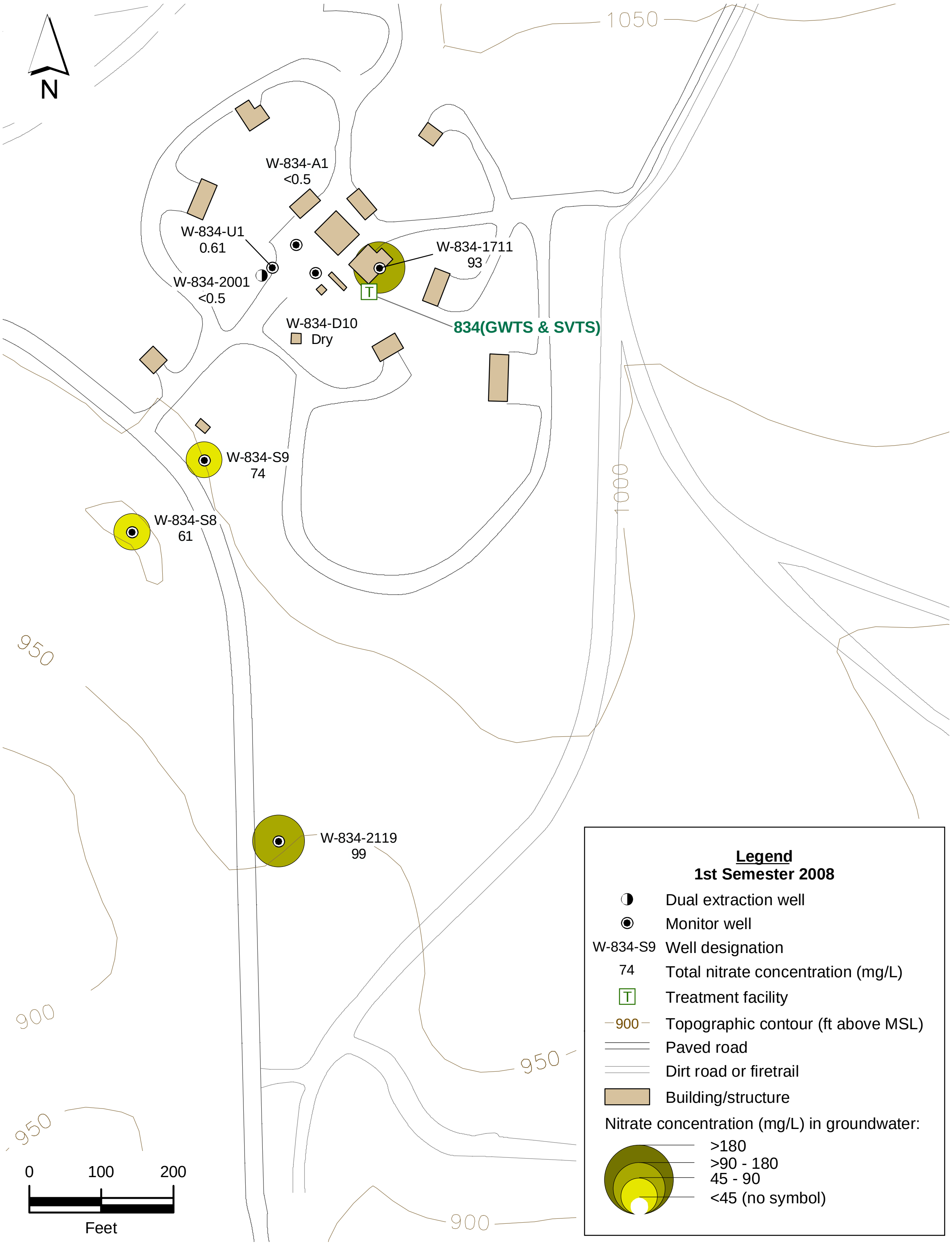


Figure 2.2-9. Building 834 OU map showing nitrate concentrations for the Tps-Tnsc$_2$ HSU.

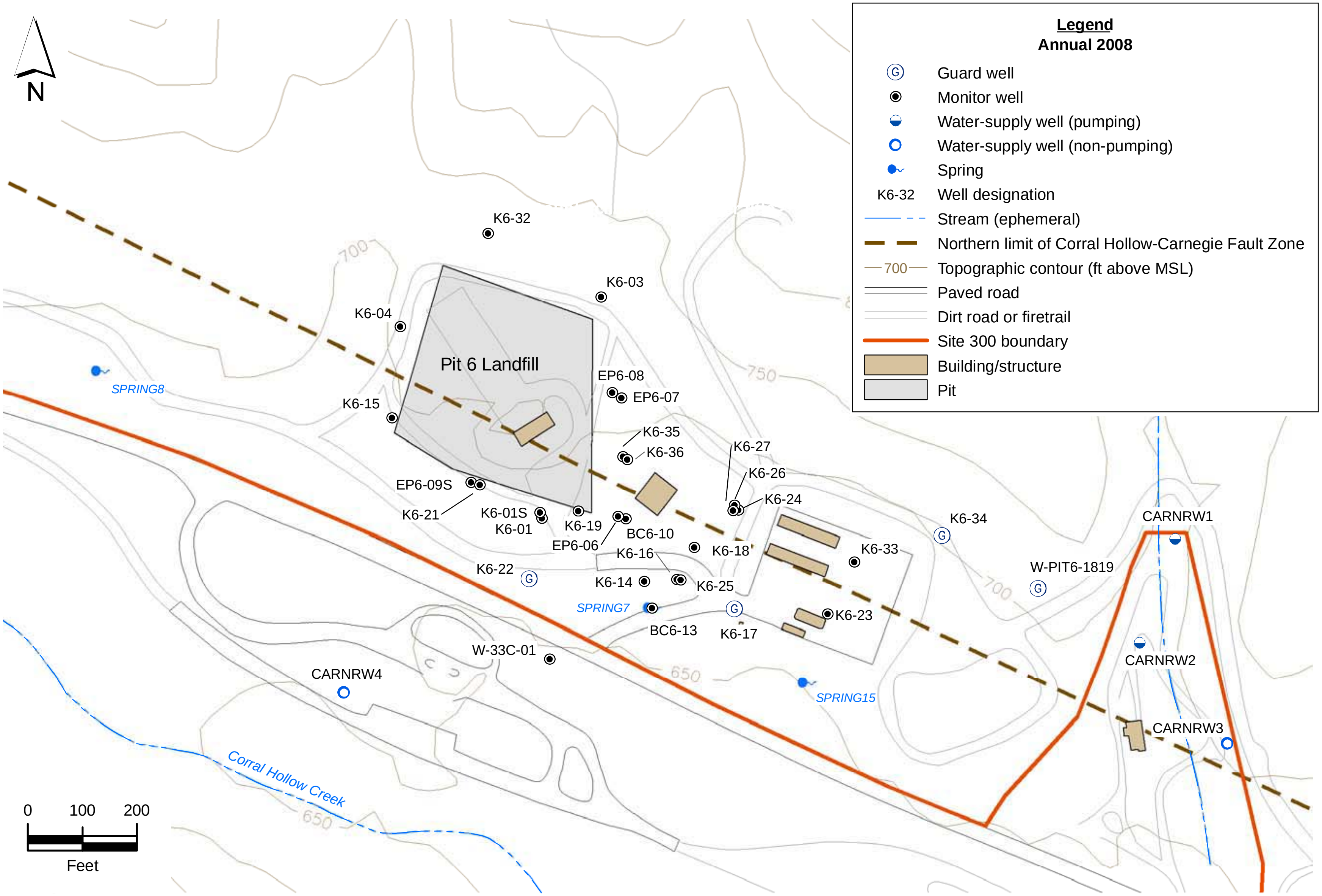


Figure 2.3-1. Pit 6 Landfill OU site map showing monitor and water-supply wells.

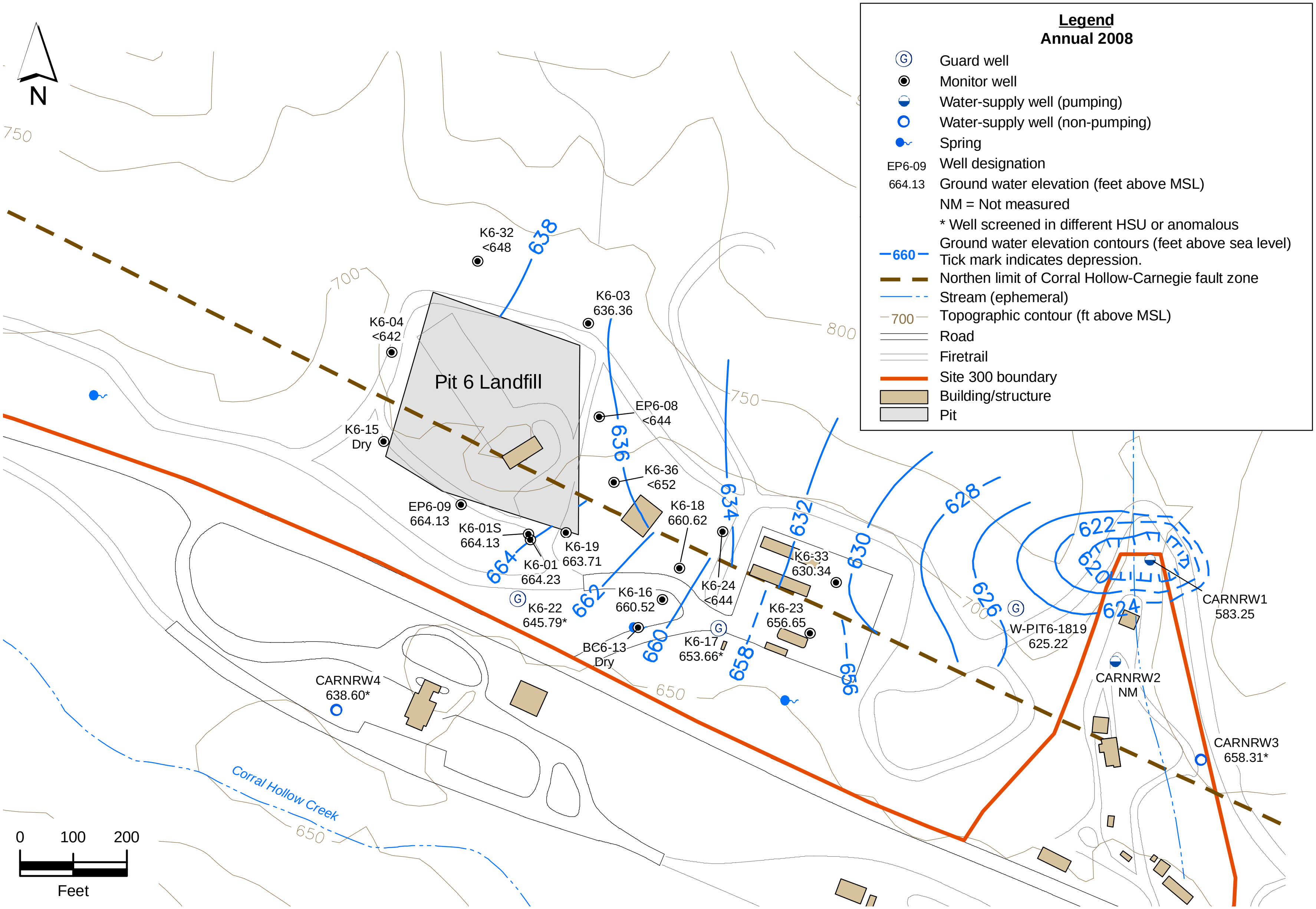


Figure 2.3-2. Pit 6 Landfill OU ground water potentiometric surface map for the Qt-Tnbs$_1$ HSU.

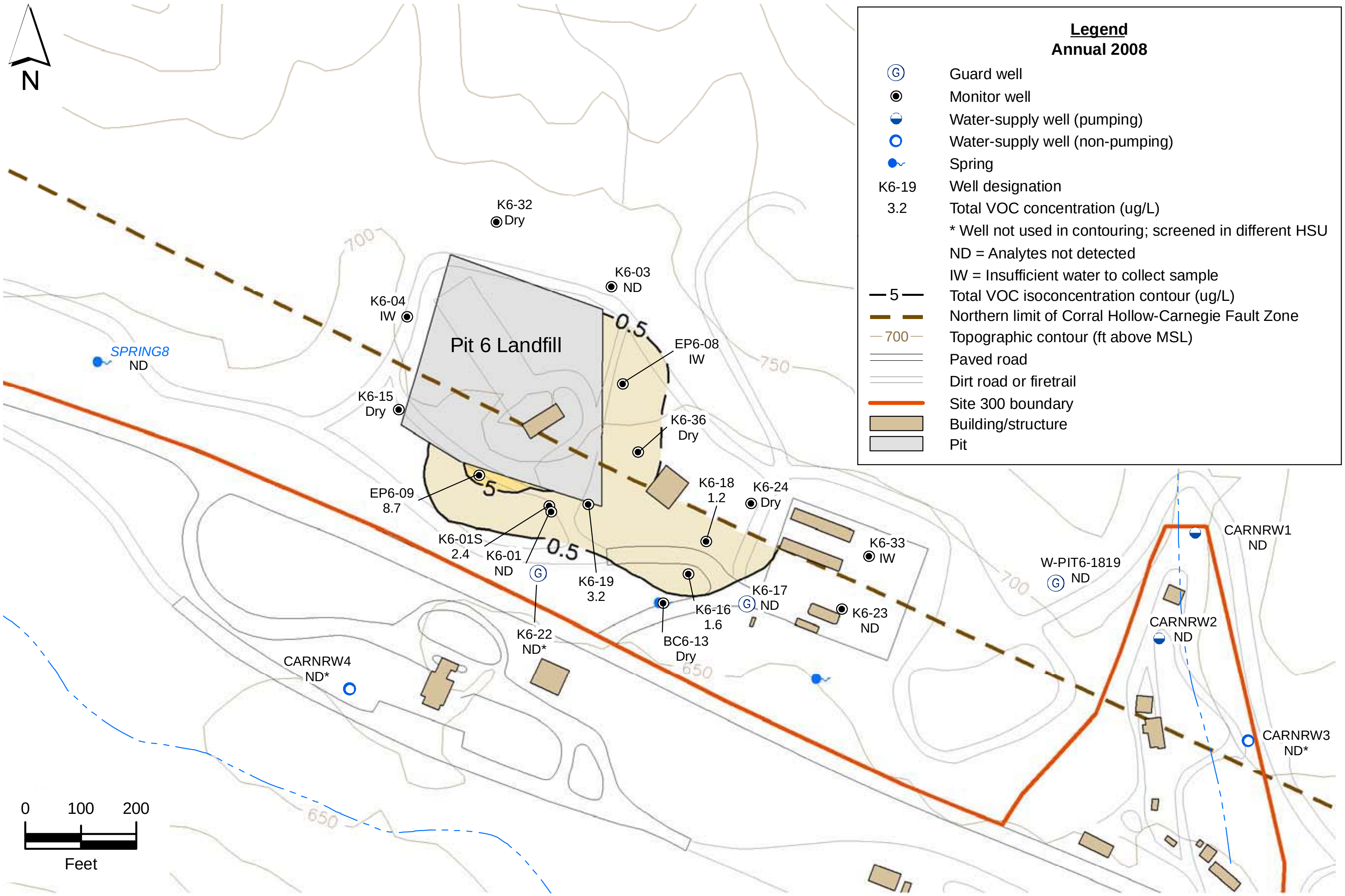


Figure 2.3-3. Pit 6 Landfill OU total VOC isoconcentration contour map for the Qt-Tnbs$_1$ HSU.

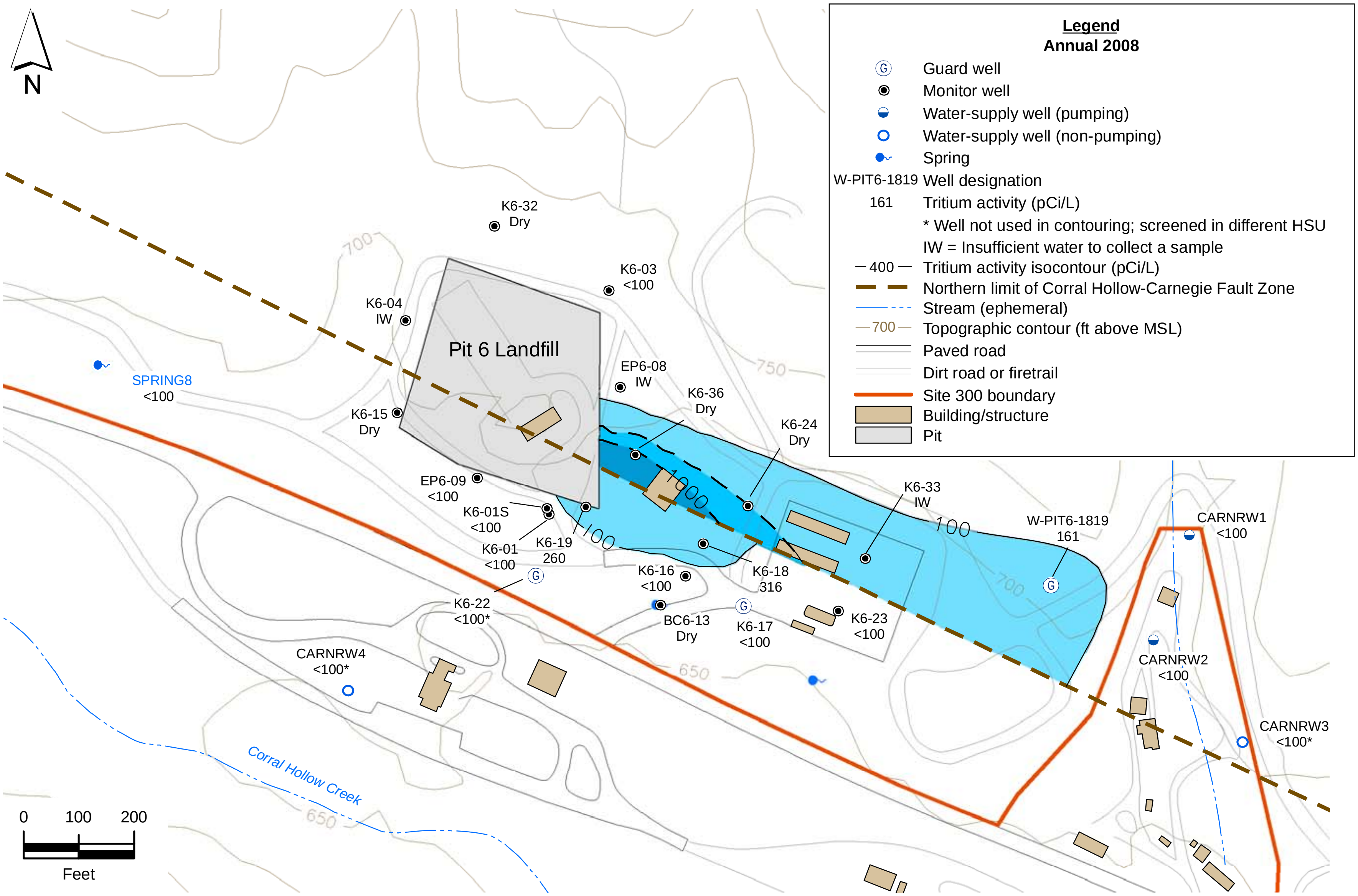


Figure 2.3-4. Pit 6 Landfill OU tritium activity isocontour map for the Qt-Tnbs$_1$ HSU.

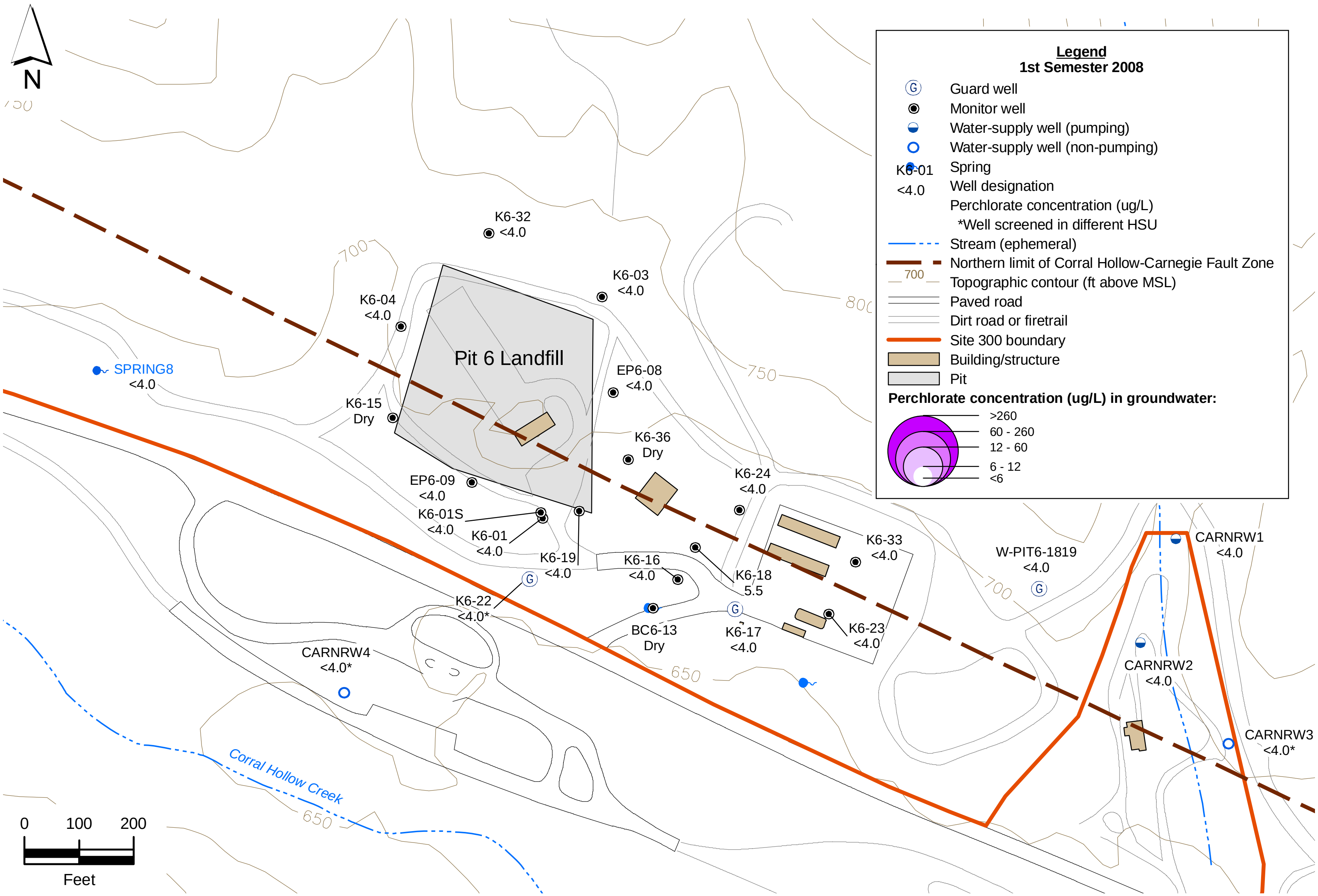


Figure 2.3-5. Pit 6 Landfill OU map showing perchlorate concentrations for the Qt-Tnbs$_1$ HSU.

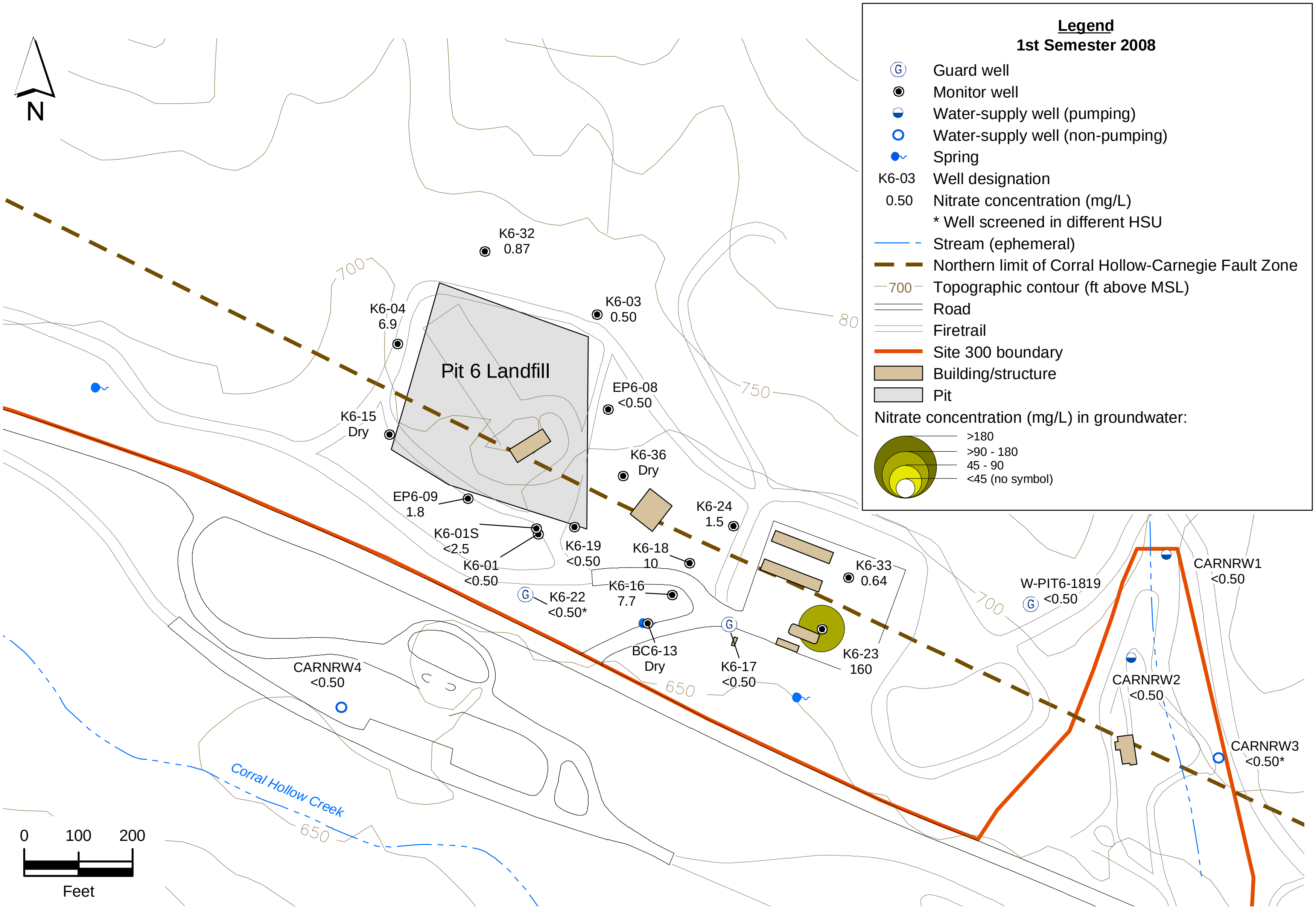


Figure 2.3-6. Pit 6 Landfill OU map showing nitrate concentrations for the Qt-Tnbs$_1$ HSU.

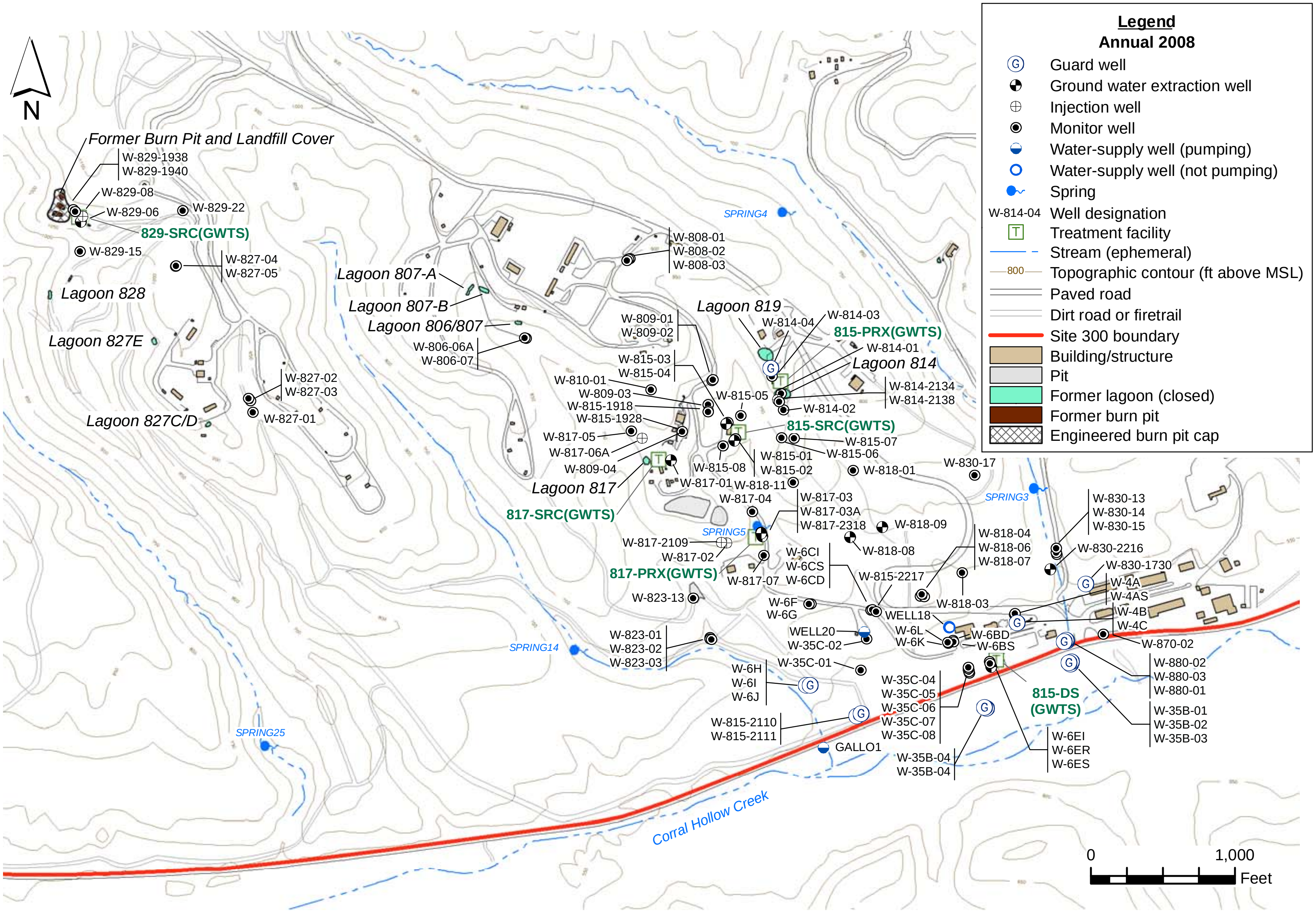


Figure 2.4-1. High Explosives Process Area OU site map showing monitor, extraction, injection and water-supply wells, and treatment facilities.

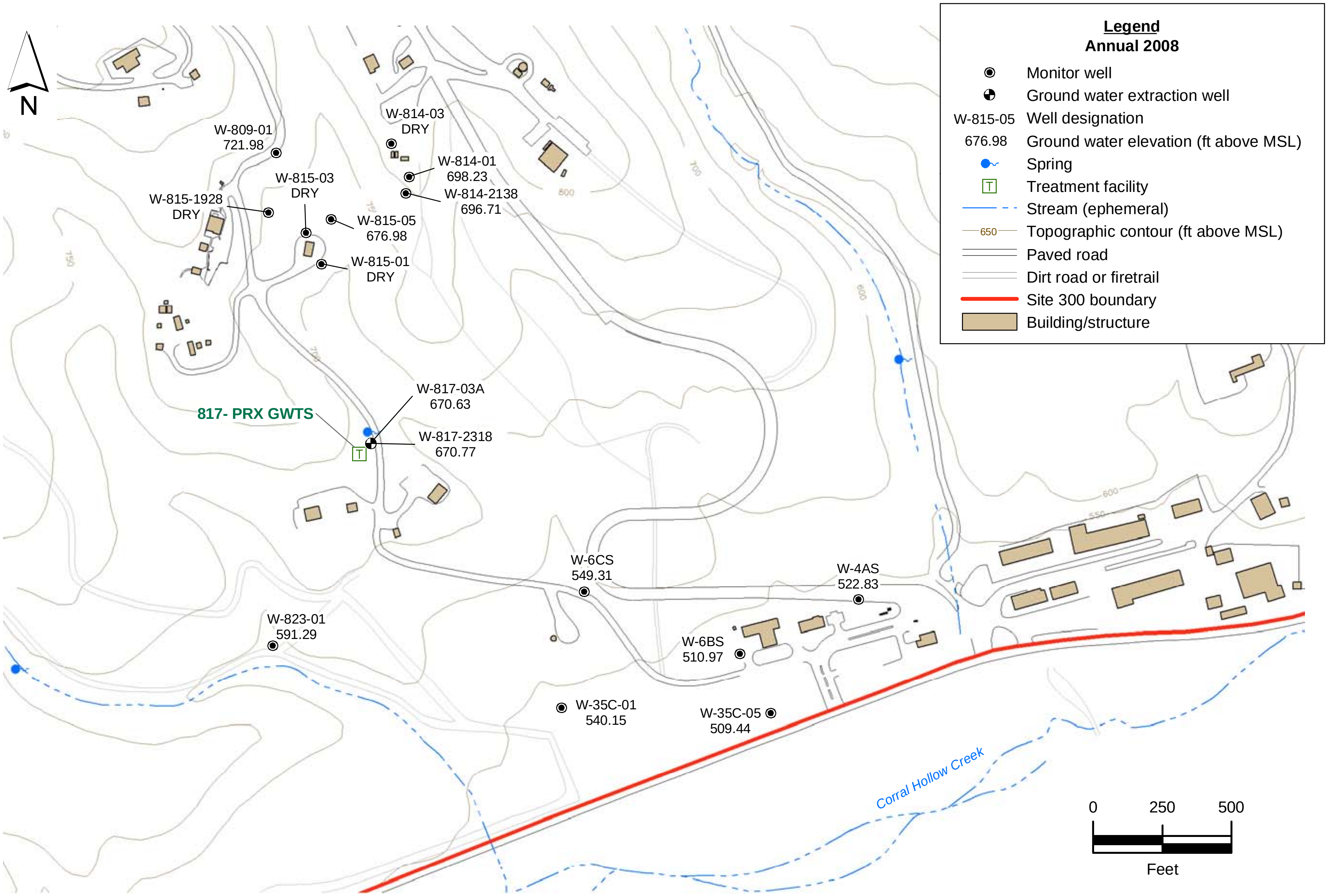


Figure 2.4-2. High Explosives Process Area OU map showing ground water elevations for the Tpsg HSU.

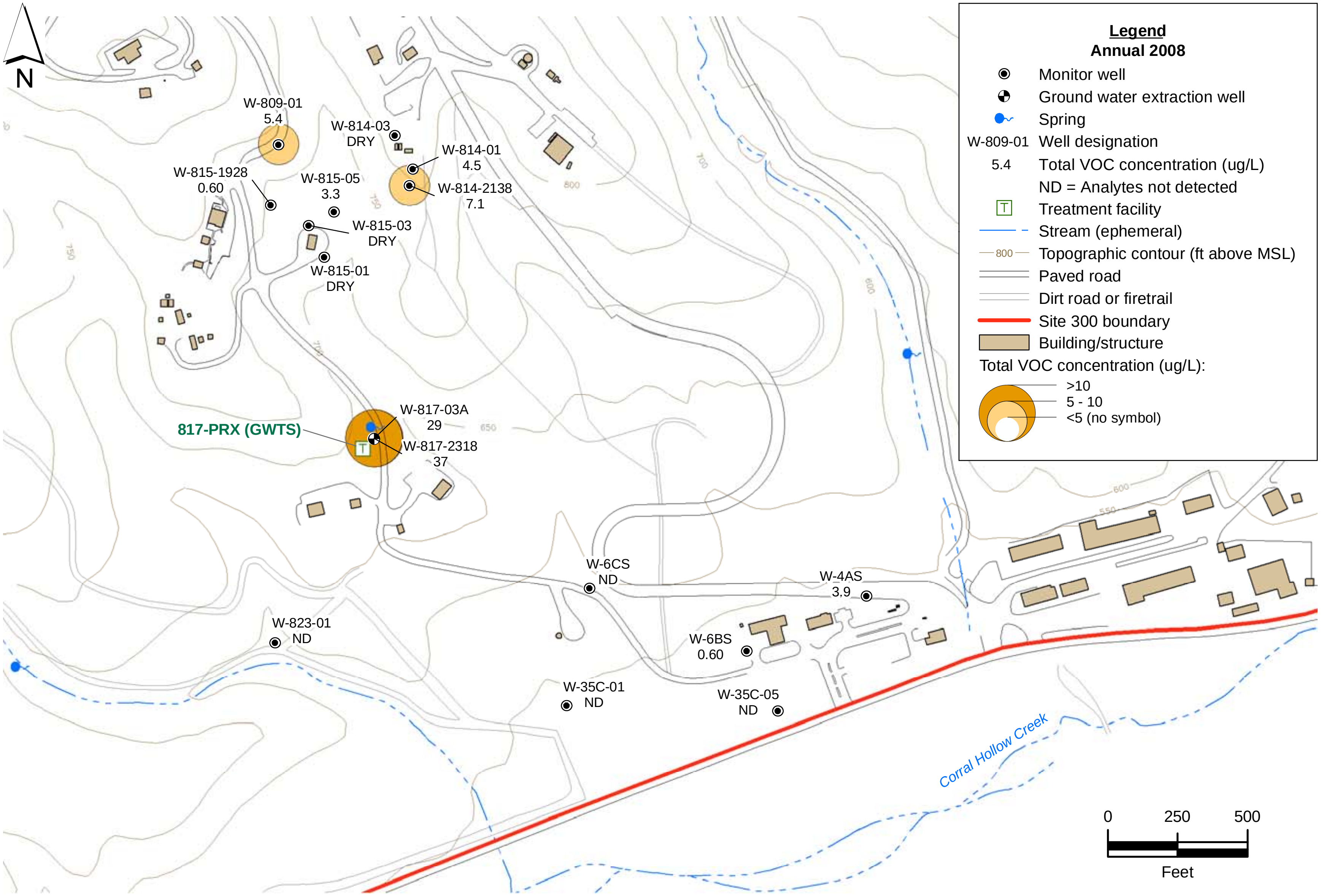


Figure 2.4-3. High Explosives Process Area OU map showing total VOC concentrations for the Tpsg HSU.

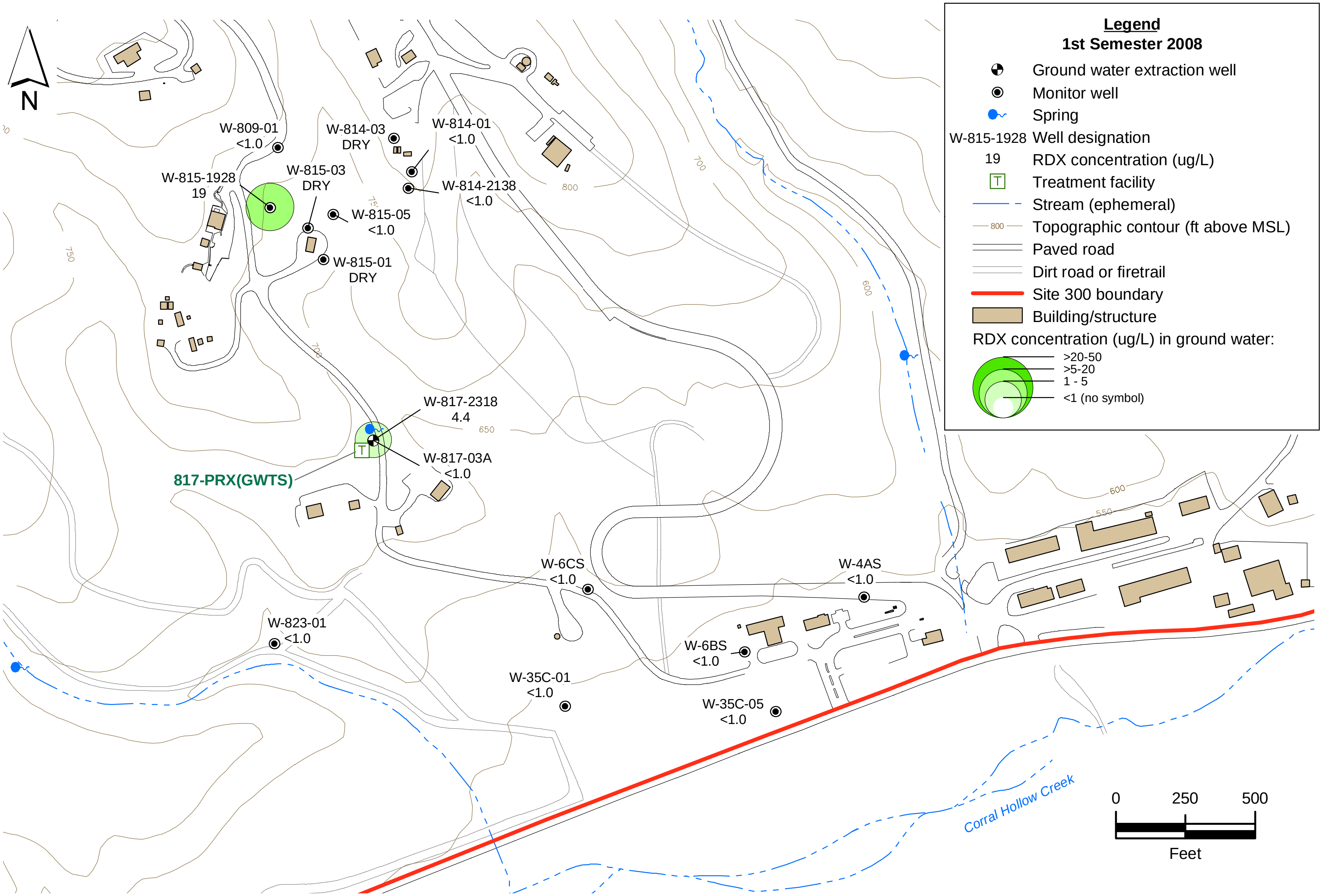


Figure 2.4-4. High Explosives Process Area map showing RDX concentrations for the Tpsg HSU.

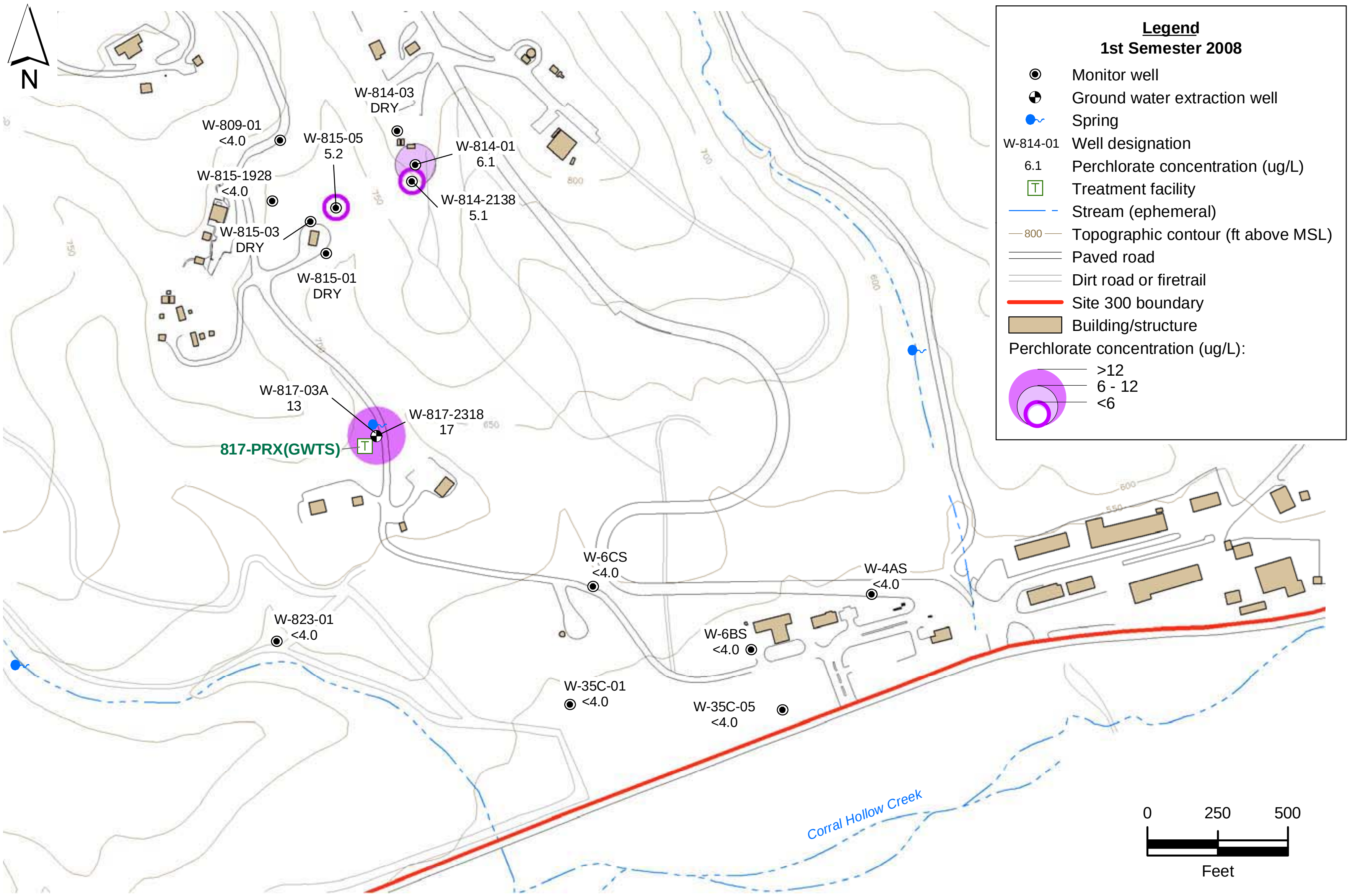


Figure 2.4-5. High Explosives Process Area OU map showing perchlorate concentrations for the Tpsg HSU.

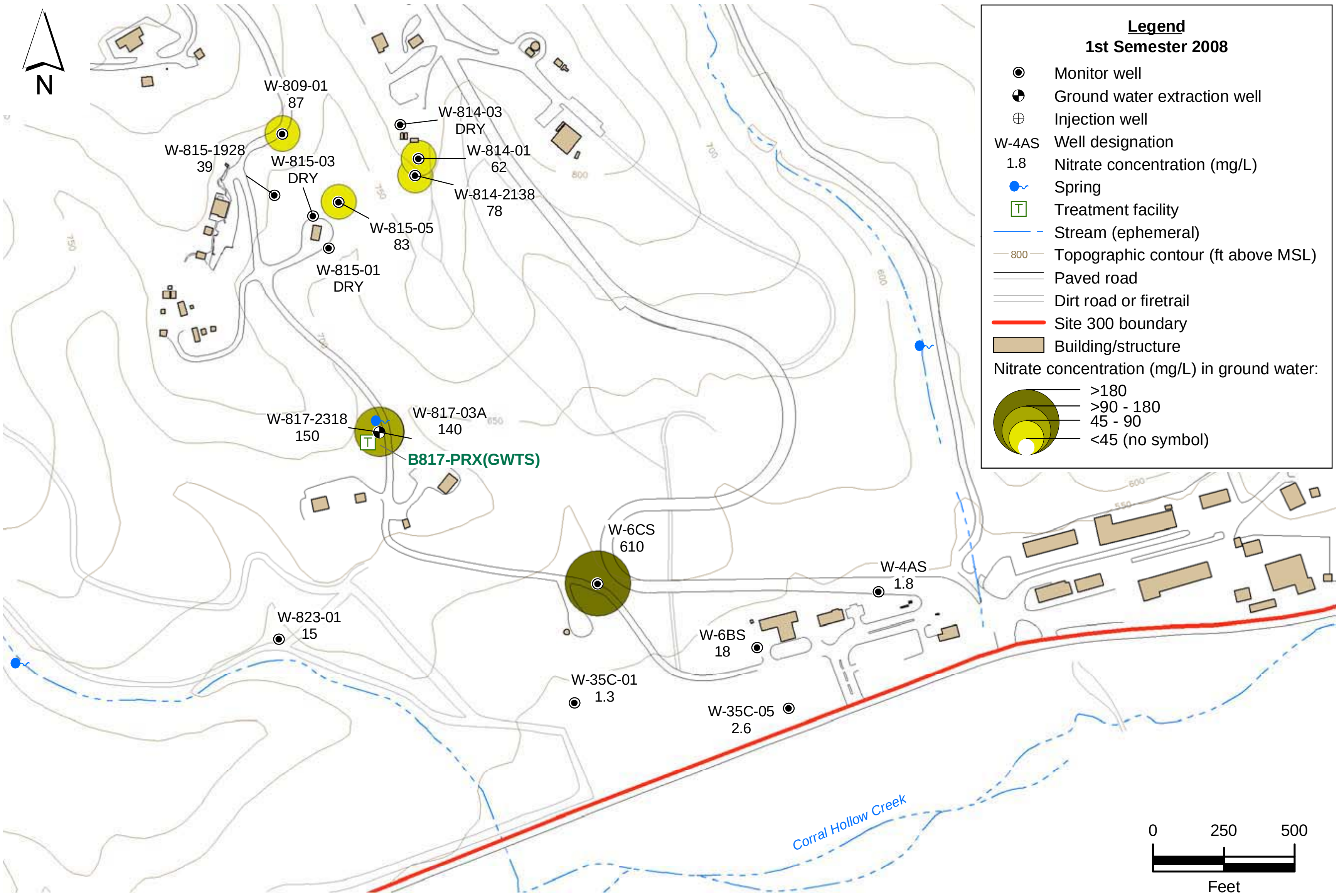


Figure 2.4-6. High Explosives Process Area OU map showing nitrate concentrations for the Tpsg HSU.

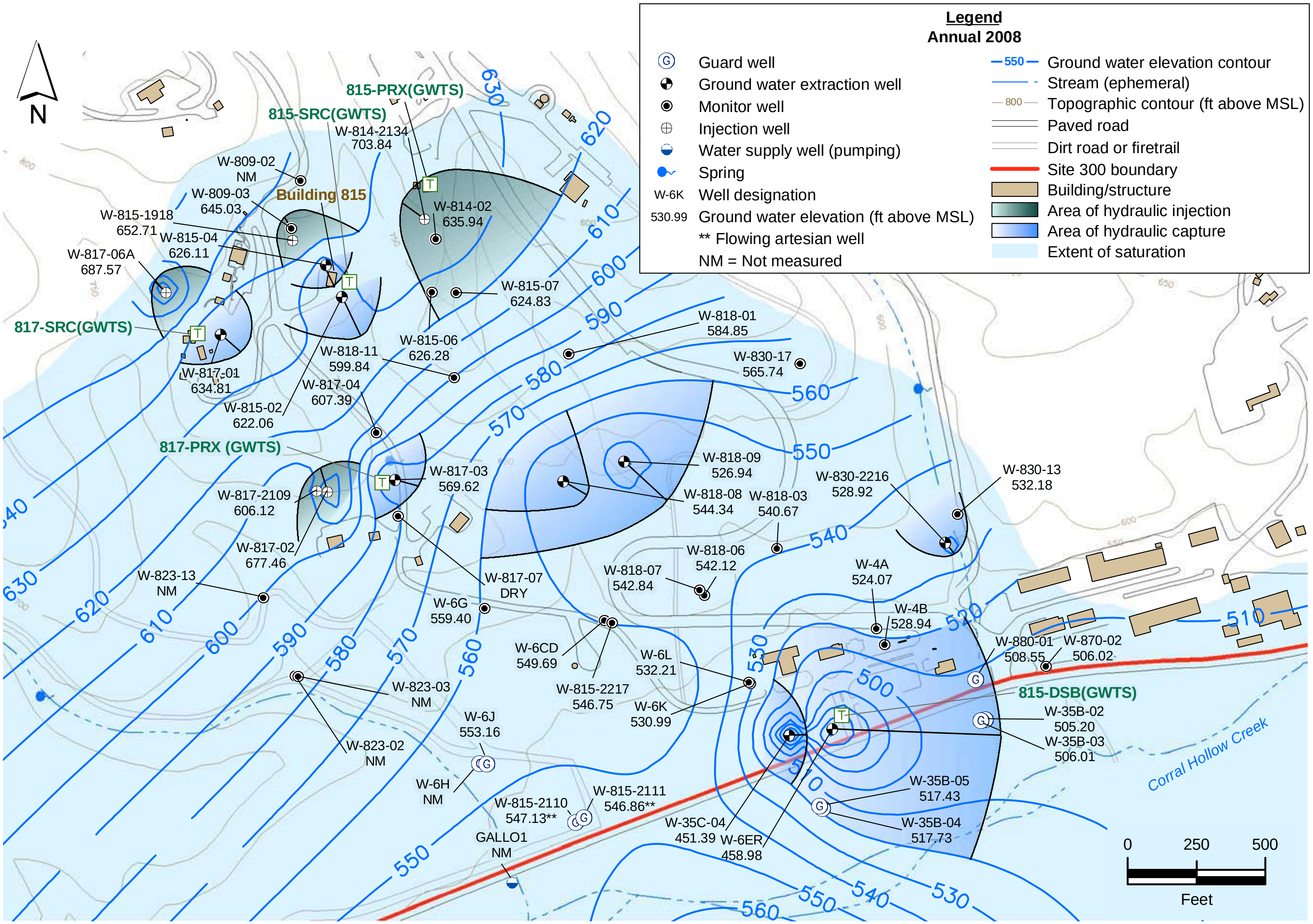


Figure 2.4-7. High Explosives Process Area OU ground water potentiometric surface map for the Tnbs$_2$ HSU.

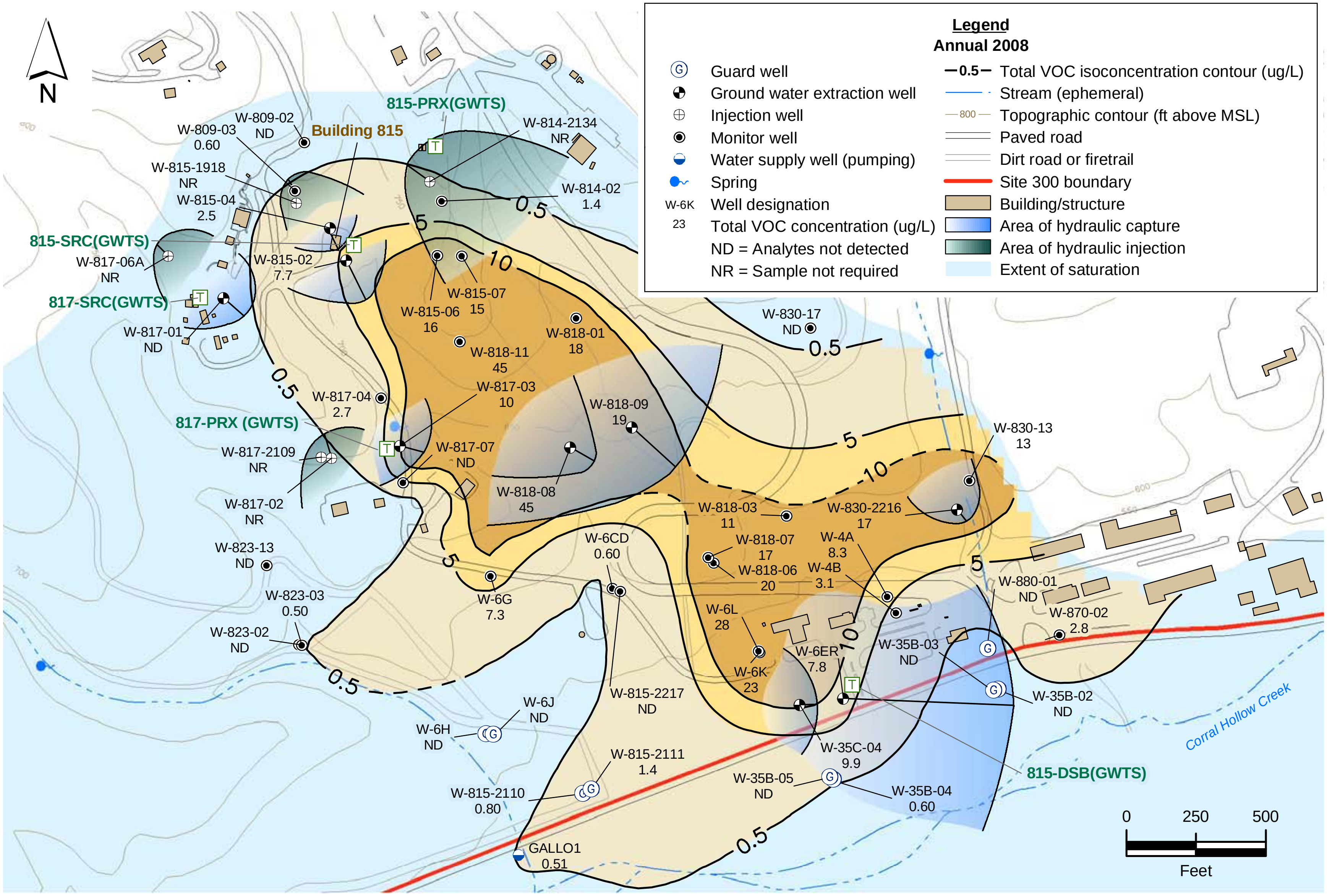


Figure 2.4-8. High Explosives Process Area OU total VOC isoconcentration contour map for the Tnbs$_2$ HSU.

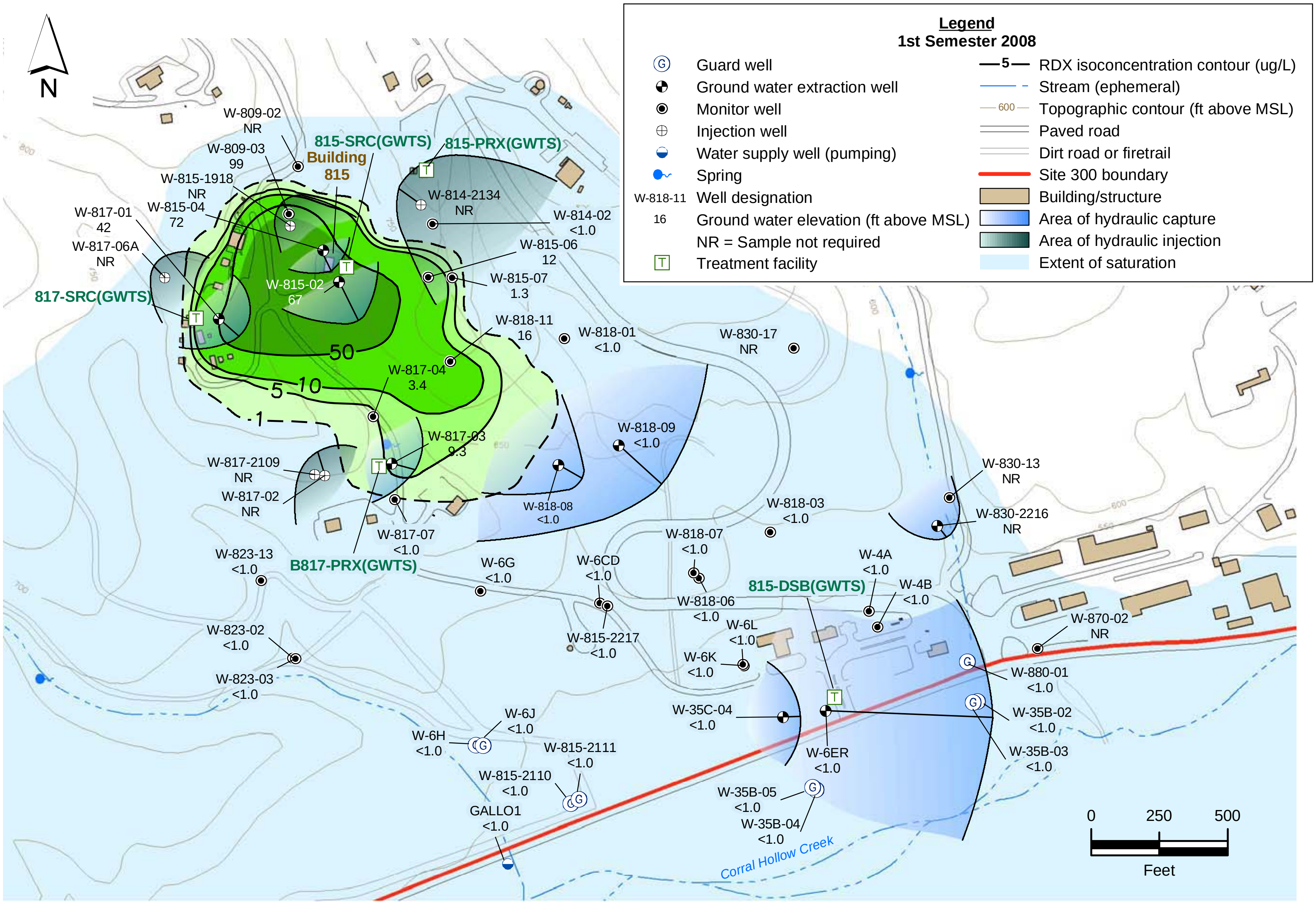


Figure 2.4-9. High Explosives Process Area RDX isoconcentration contour map for the Tnbs$_2$ HSU.

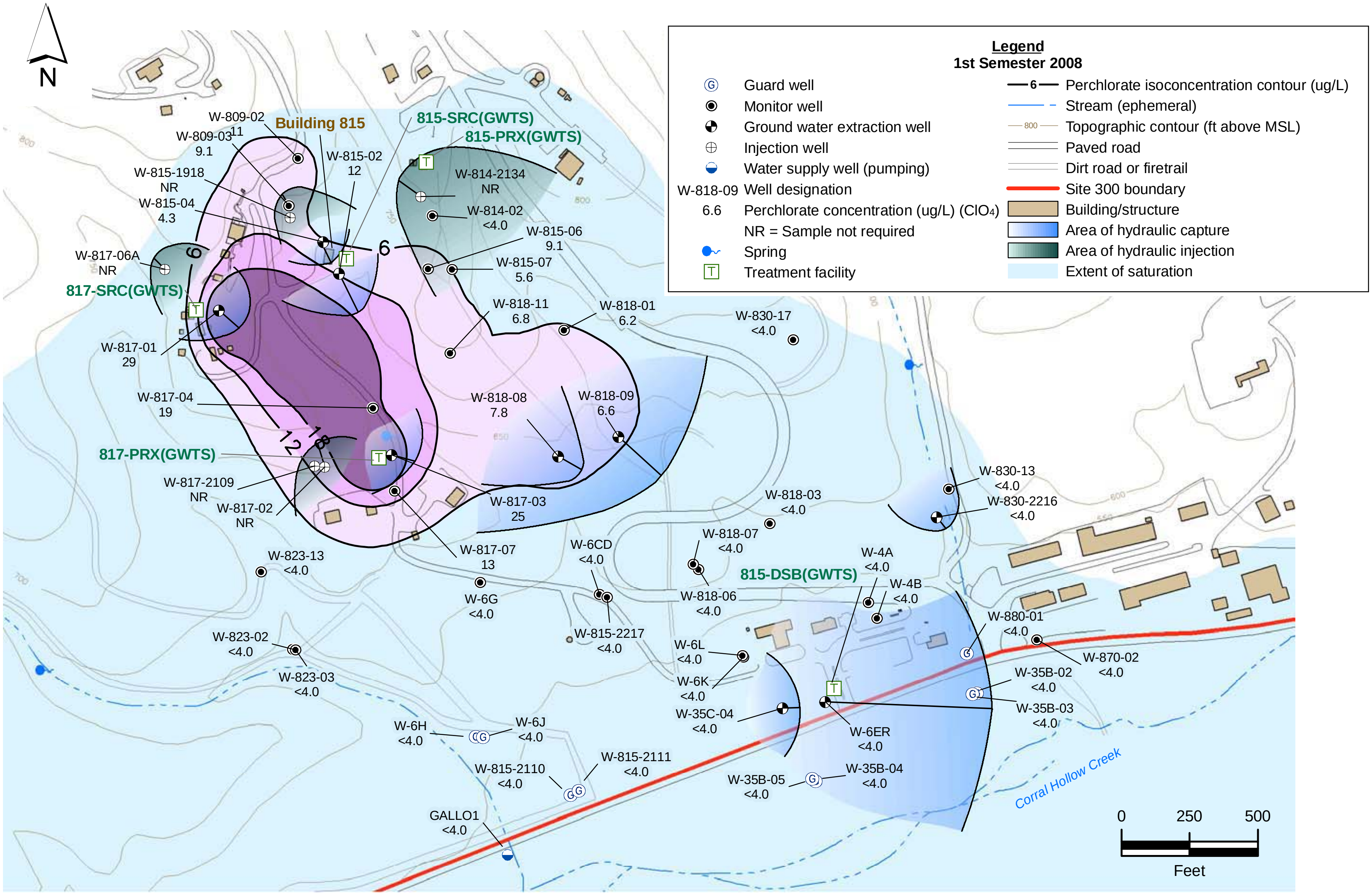


Figure 2.4-10. High Explosives Process Area perchlorate isoconcentration contour map for the Tnbs$_2$ HSU.

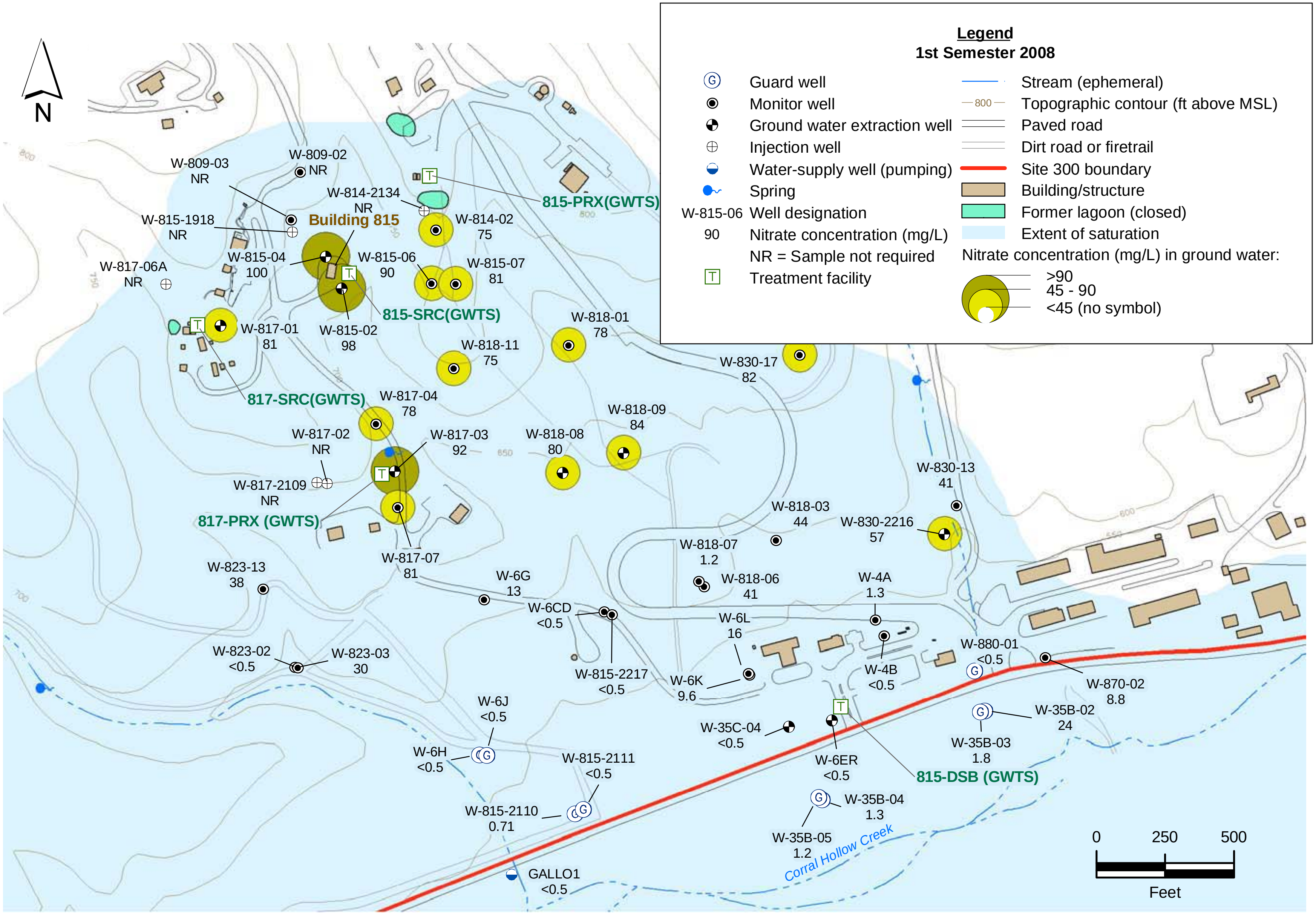


Figure 2.4-11. High Explosives Process Area map showing nitrate concentrations for the Tnbs$_2$ HSU.

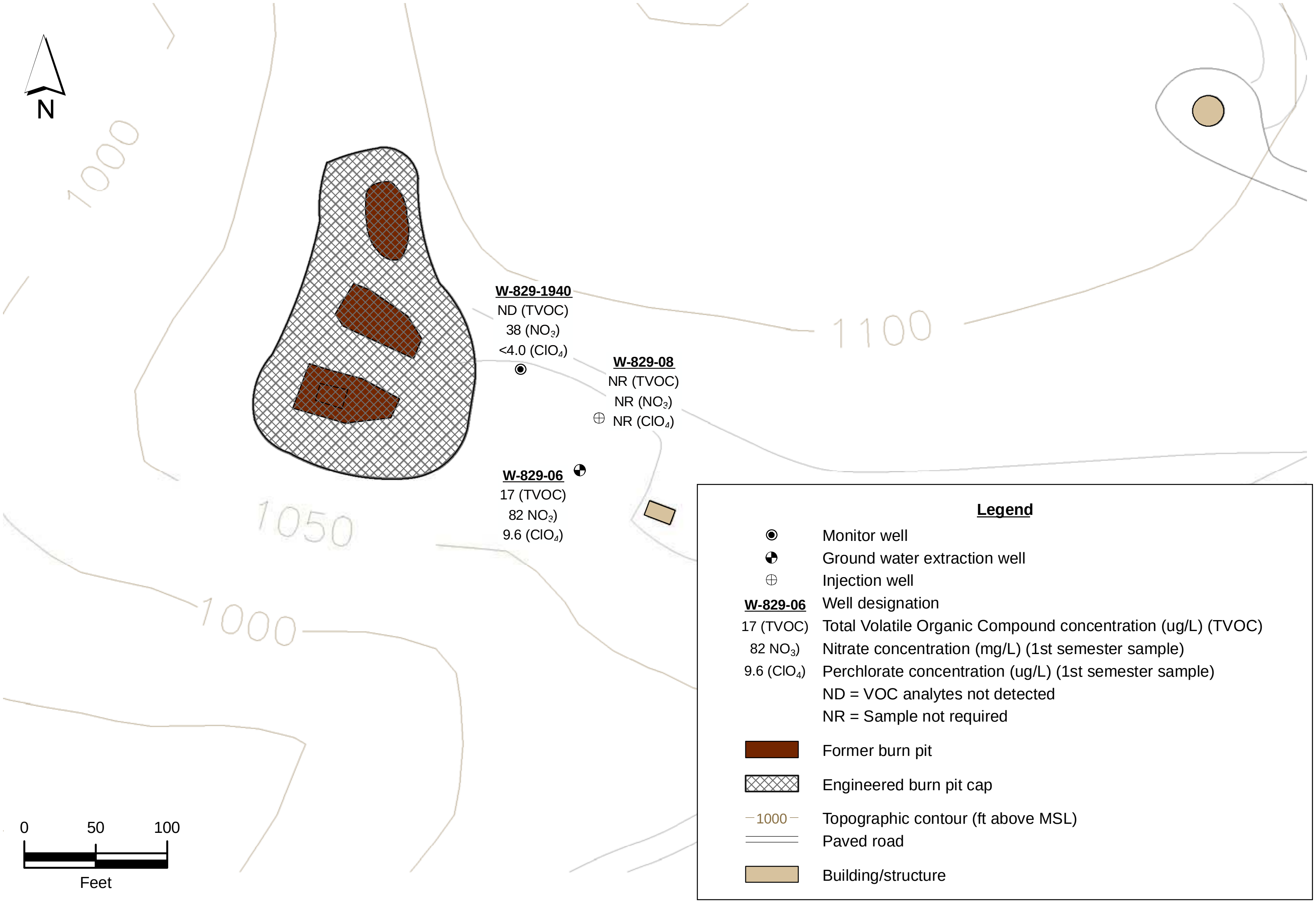


Figure 2.4-12. Building 829 burn pit map showing monitor, extraction and injection wells; ground water elevations; and total VOC, perchlorate, and nitrate concentrations for the Tnsc$_{1b}$ HSU.

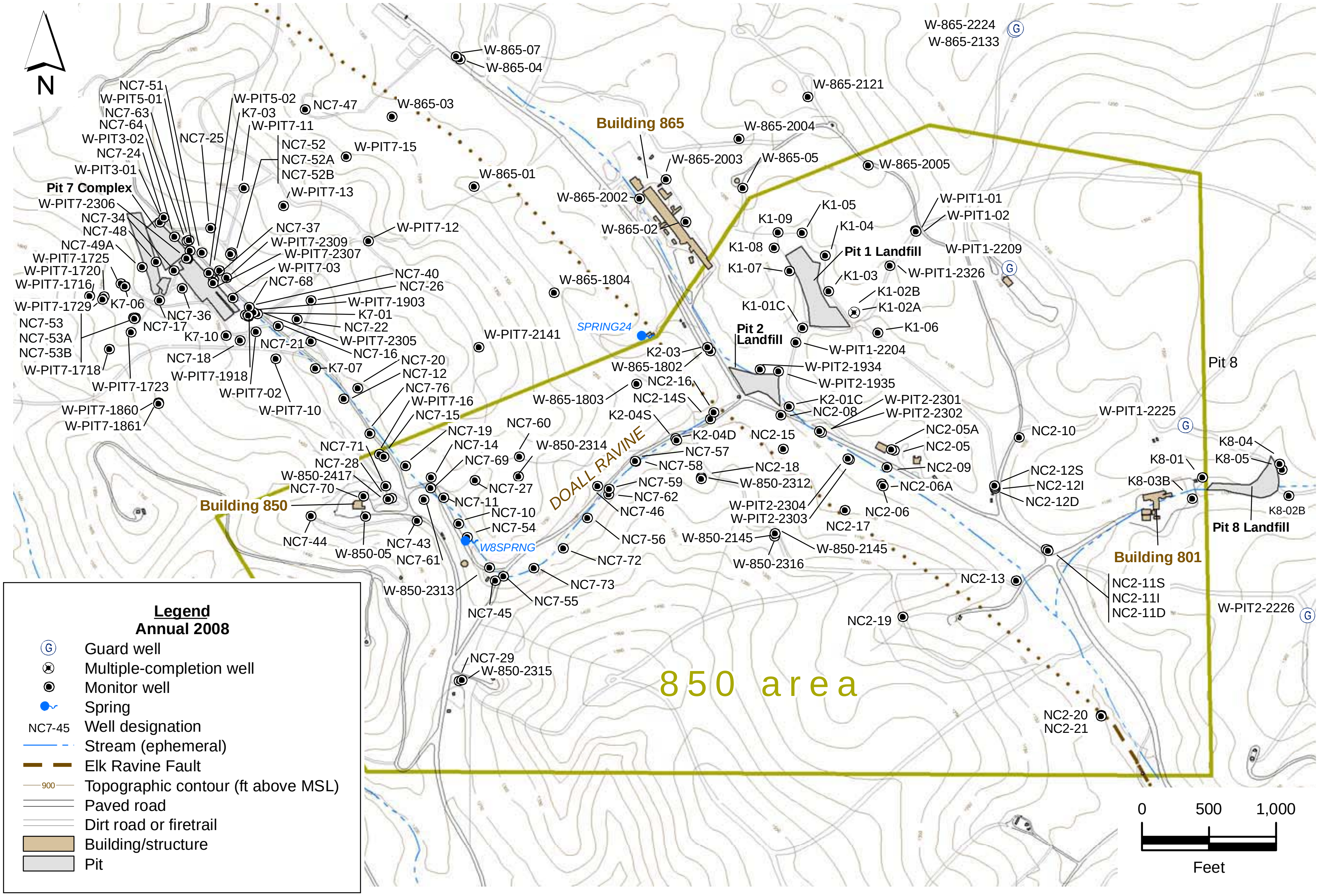


Figure 2.5-1. Building 850 area site map showing monitor wells and springs.

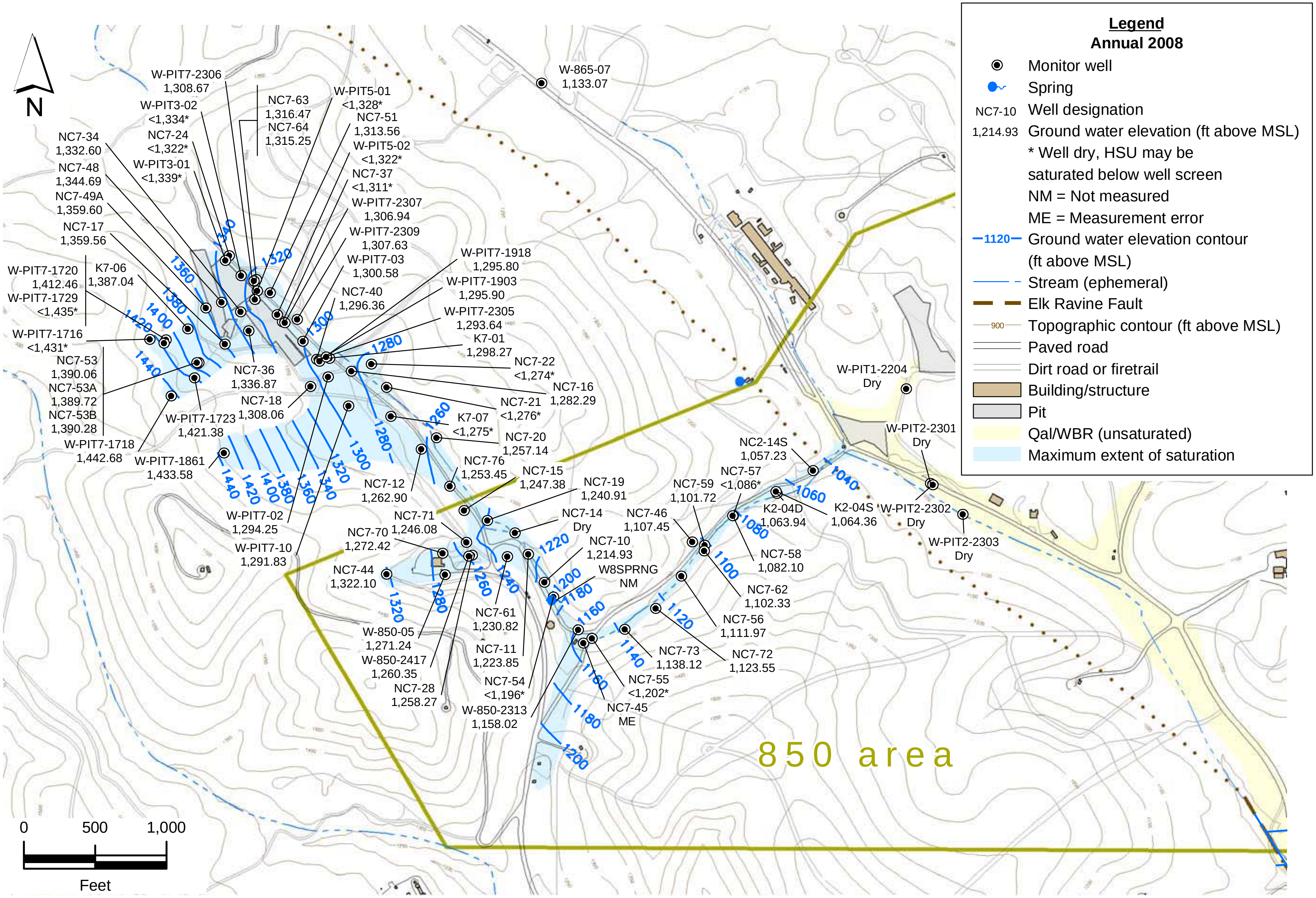


Figure 2.5-2. Building 850 area ground water potentiometric surface map for the Qal/WBR HSU.

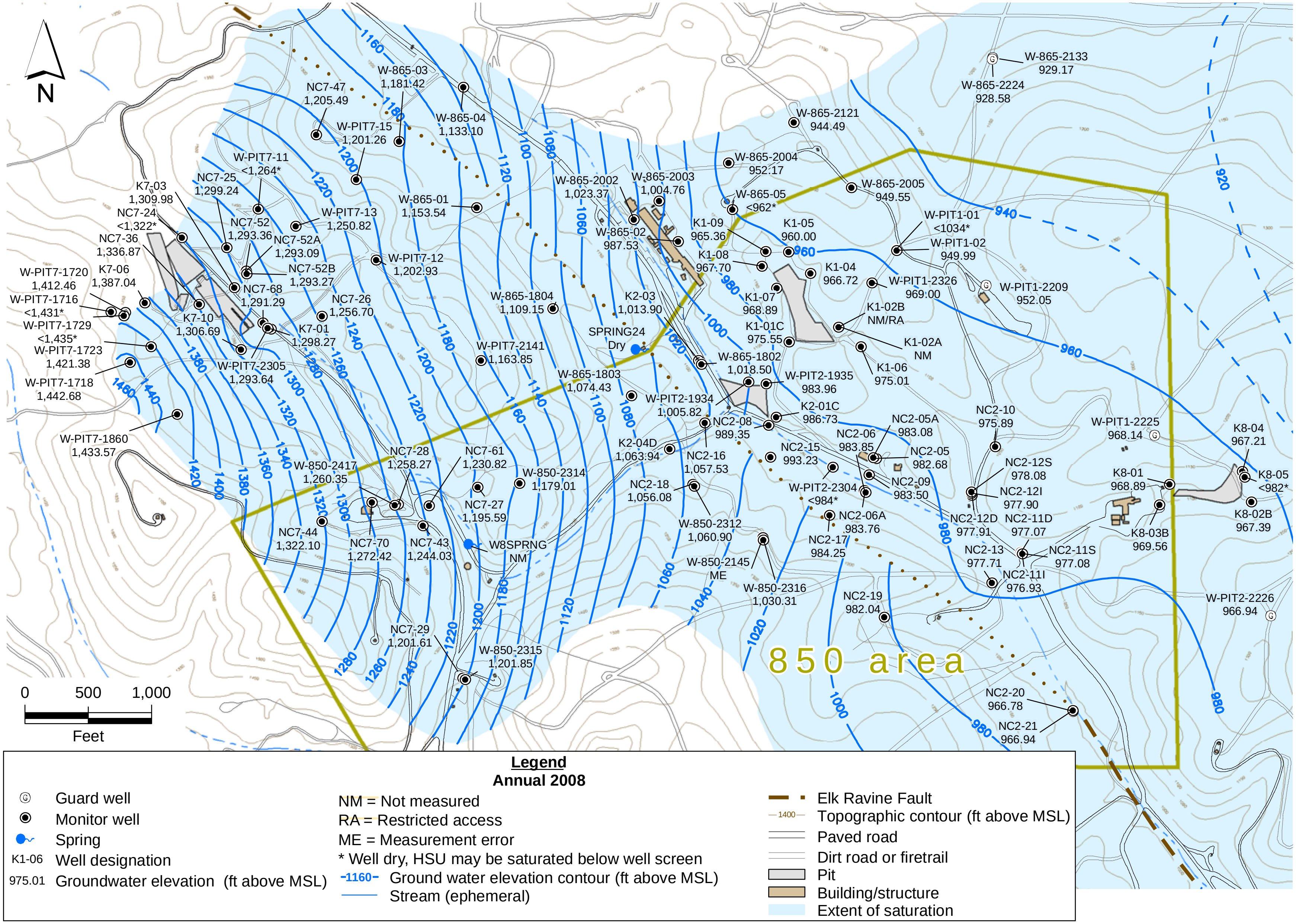


Figure 2.5-3. Building 850 area ground water potentiometric surface map for the $Tnbs_1/Tnbs_0$ HSU.

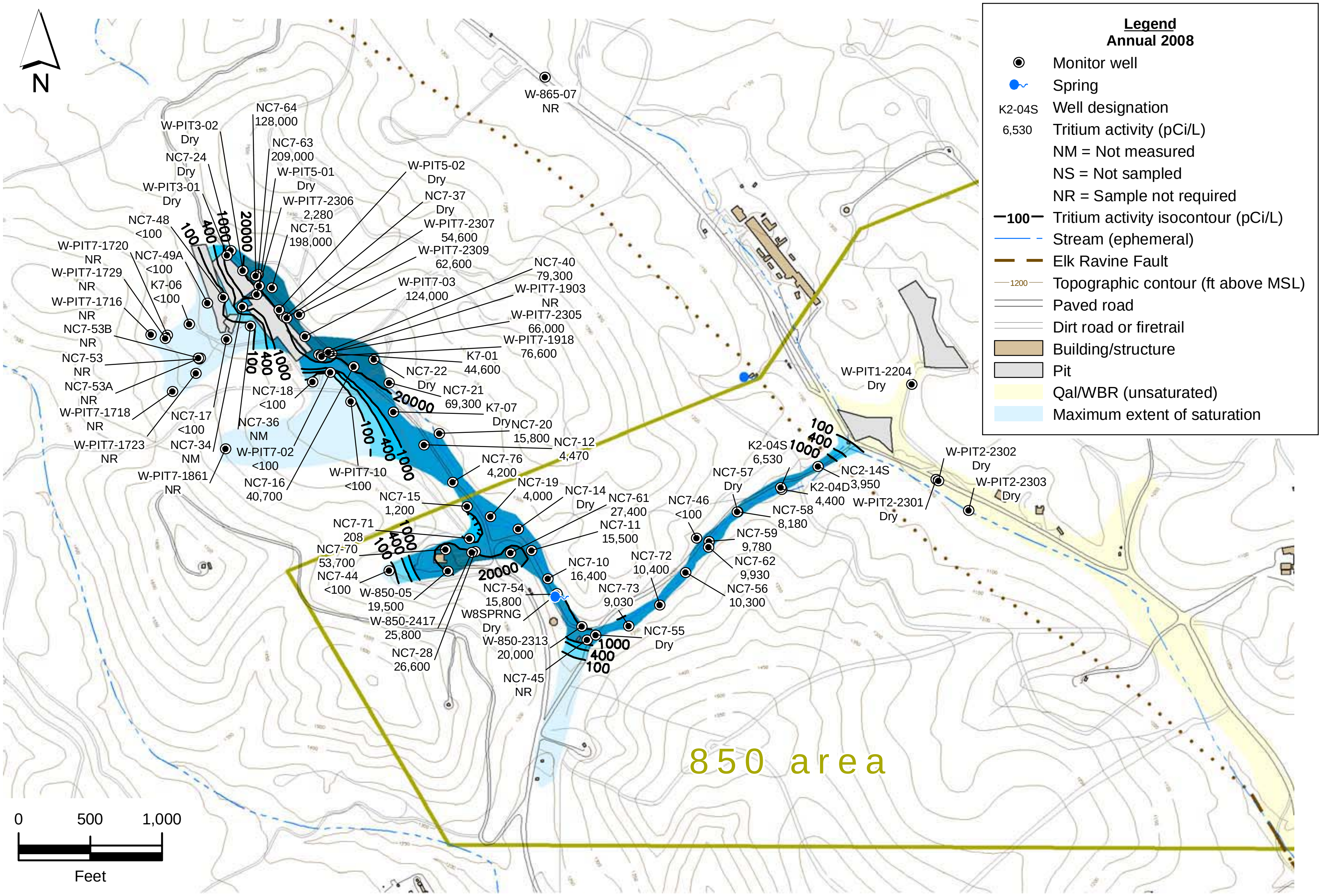


Figure 2.5-4. Building 850 area tritium activity isocontour map for the Qal/WBR HSU.

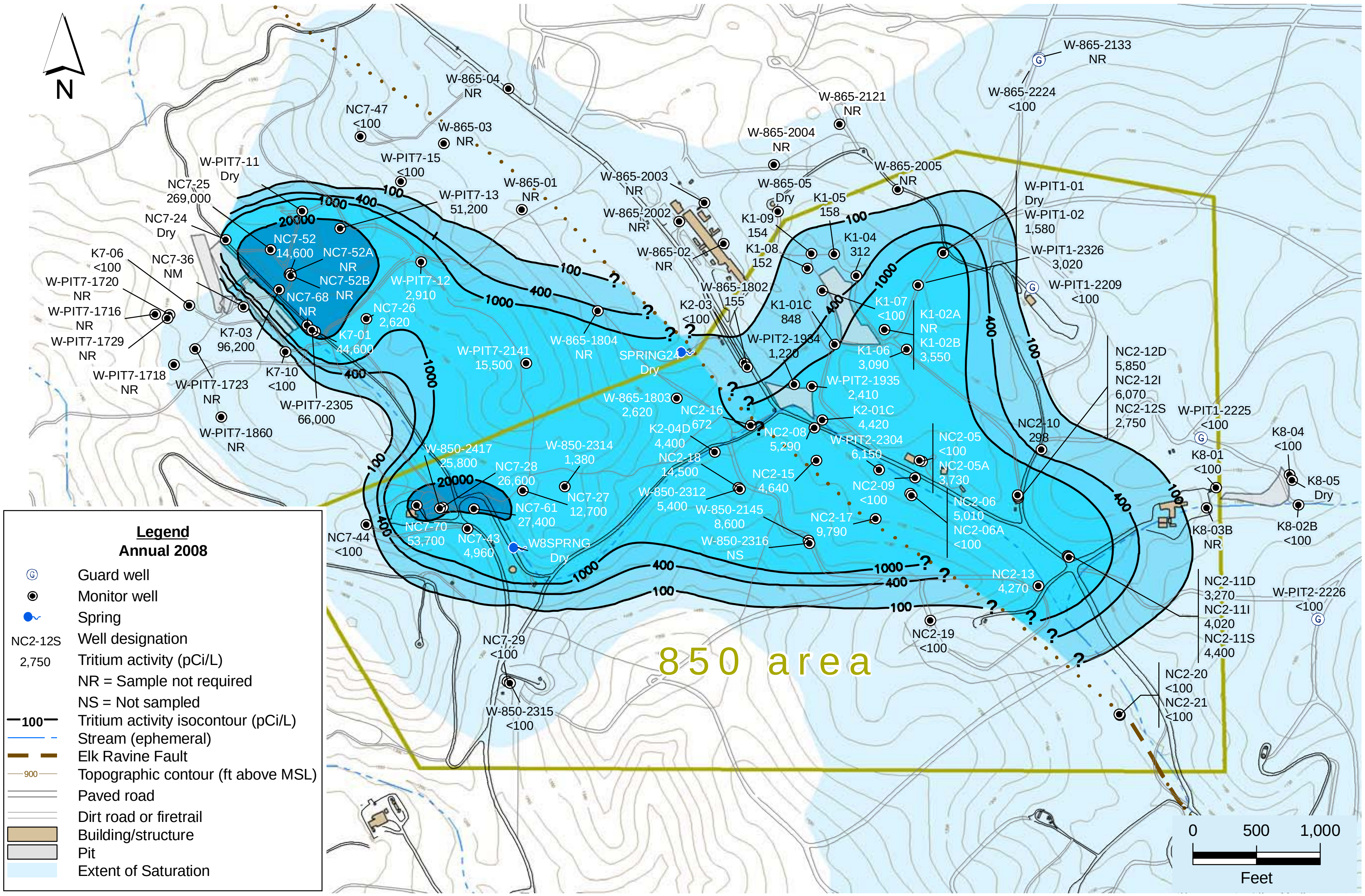


Figure 2.5-5. Building 850 area tritium activity isocontour map for the $Tnbs_1/Tnbs_0$ HSU.

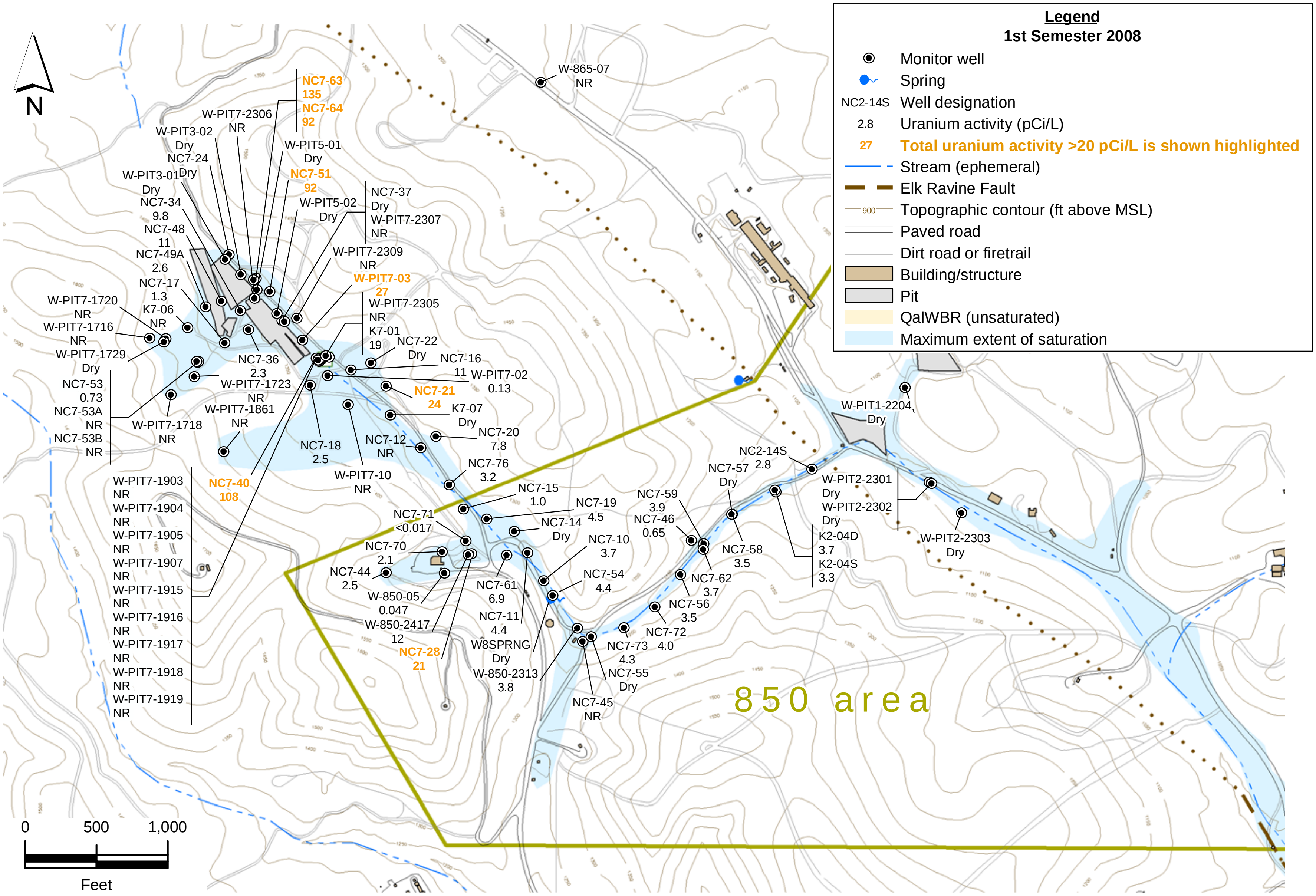


Figure 2.5-6. Building 850 area map showing ground water uranium activities for the Qal/WBR HSU.

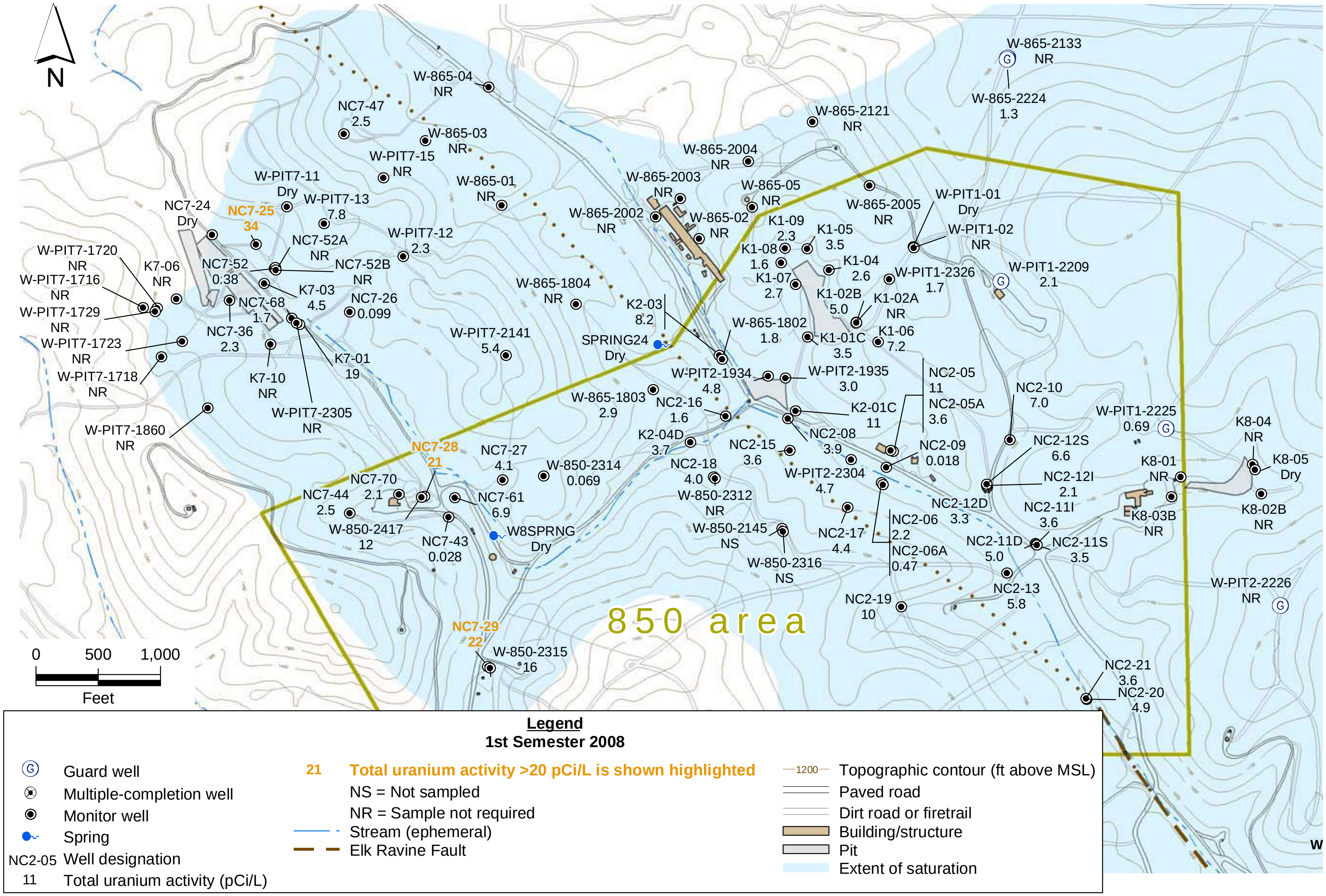


Figure 2.5-7. Building 850 area map showing ground water uranium activities for the $Tnbs_1/Tnbs_0$ HSU.

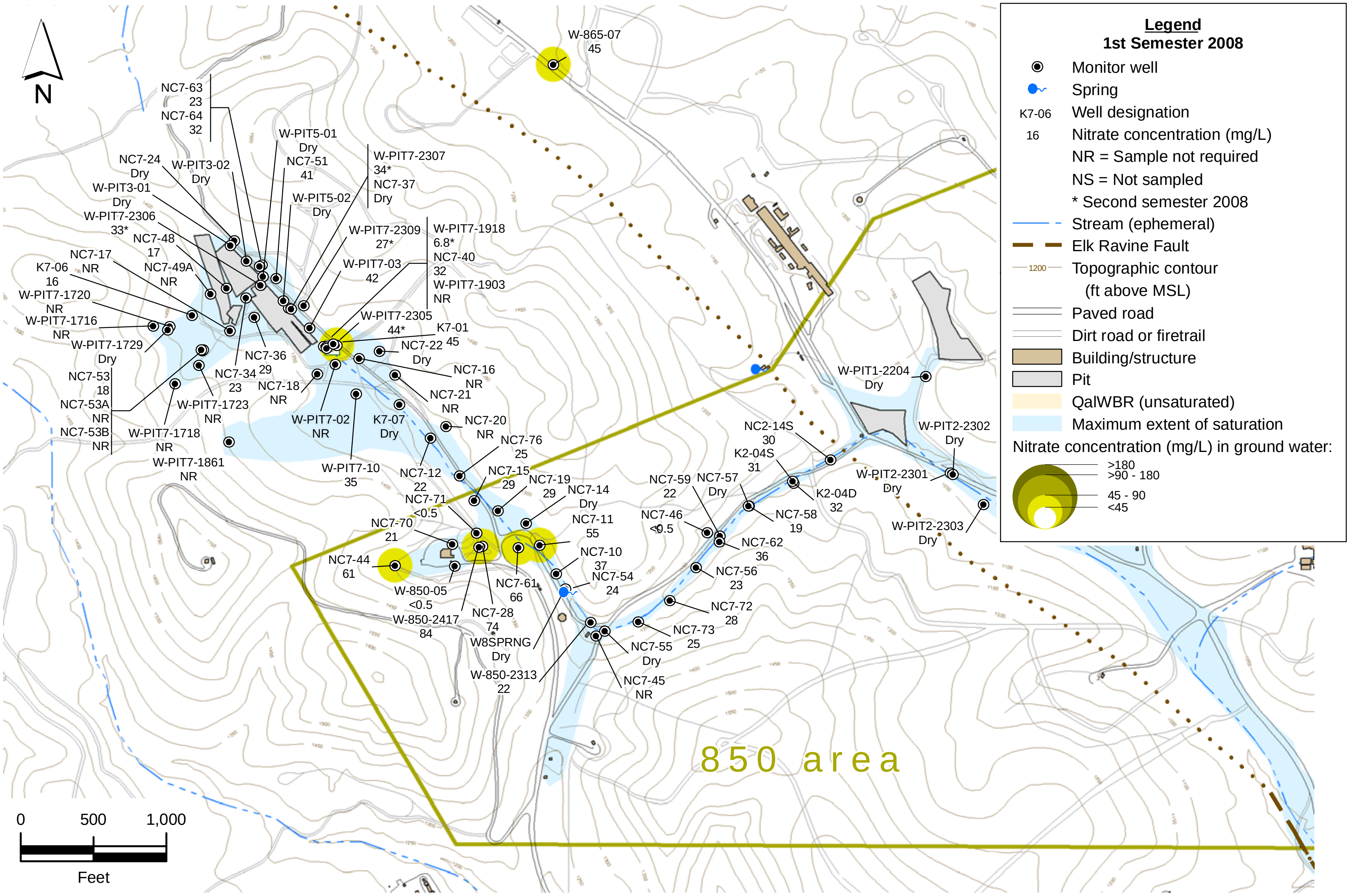


Figure 2.5-8. Building 850 area map showing nitrate concentrations for the Qal/WBR HSU.

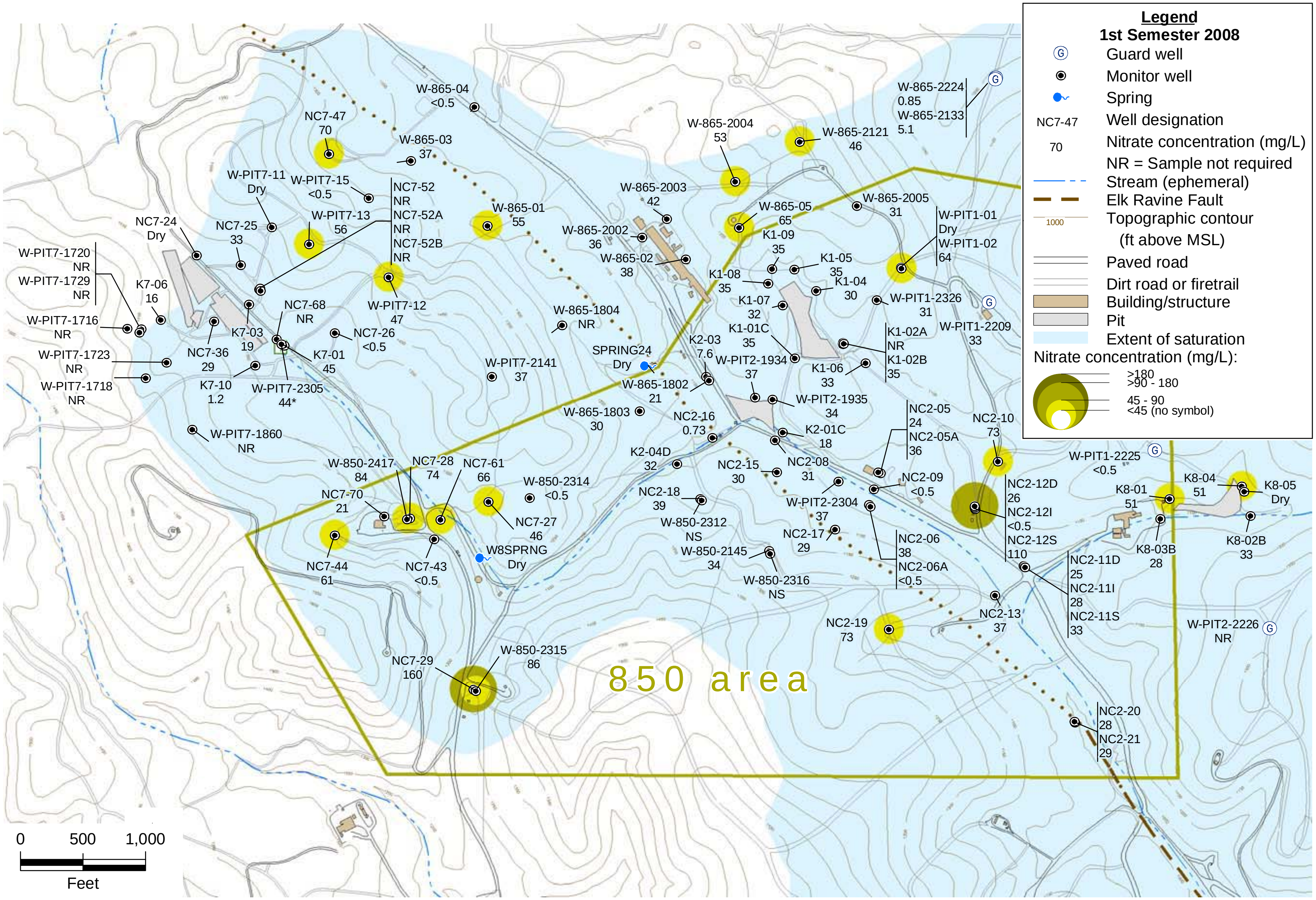


Figure 2.5-9. Building 850 area map showing nitrate concentrations for the $Tnbs_1/Tnbs_0$ HSU.

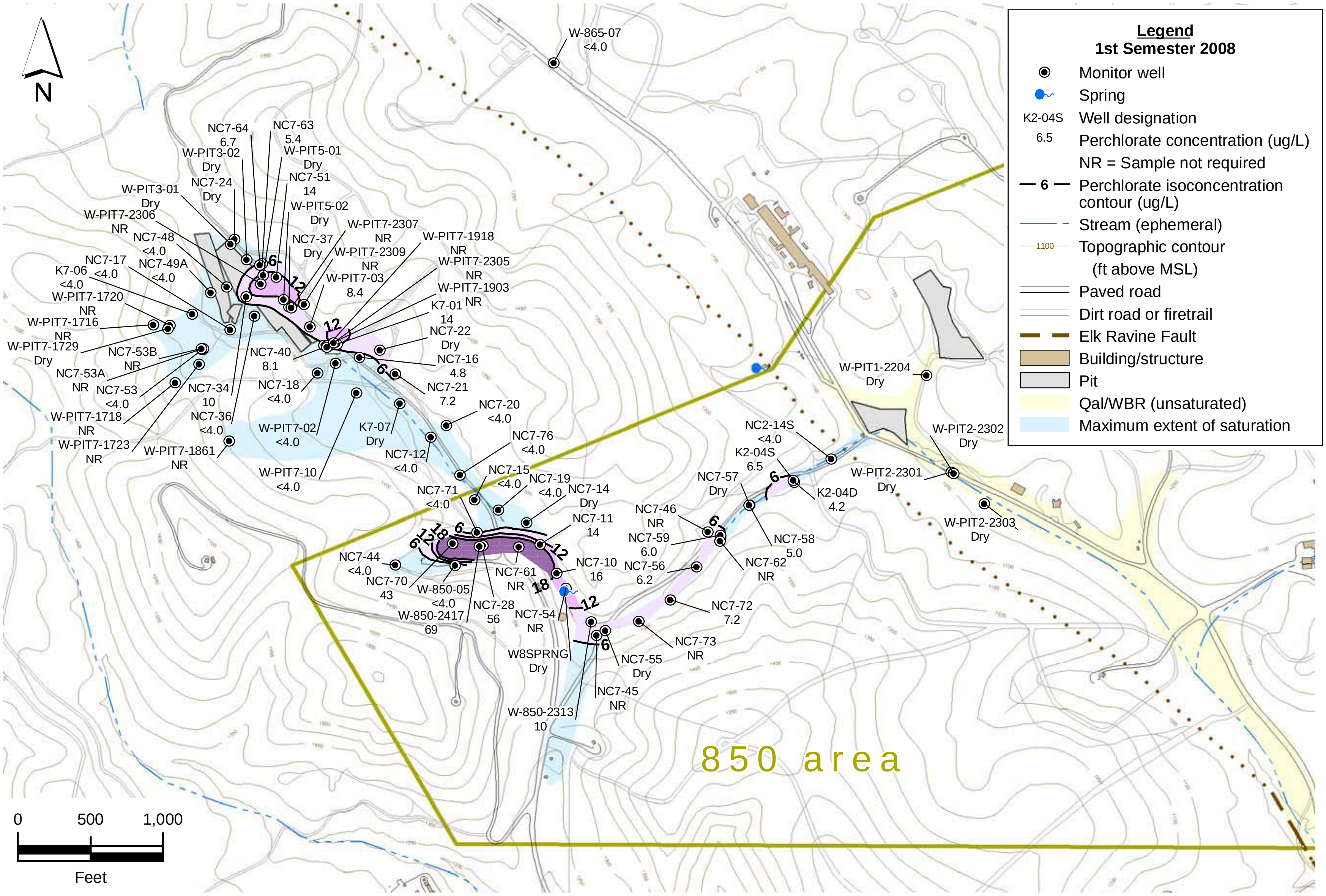


Figure 2.5-10. Building 850 area perchlorate isoconcentration contour map for the Qal/WBR HSU.

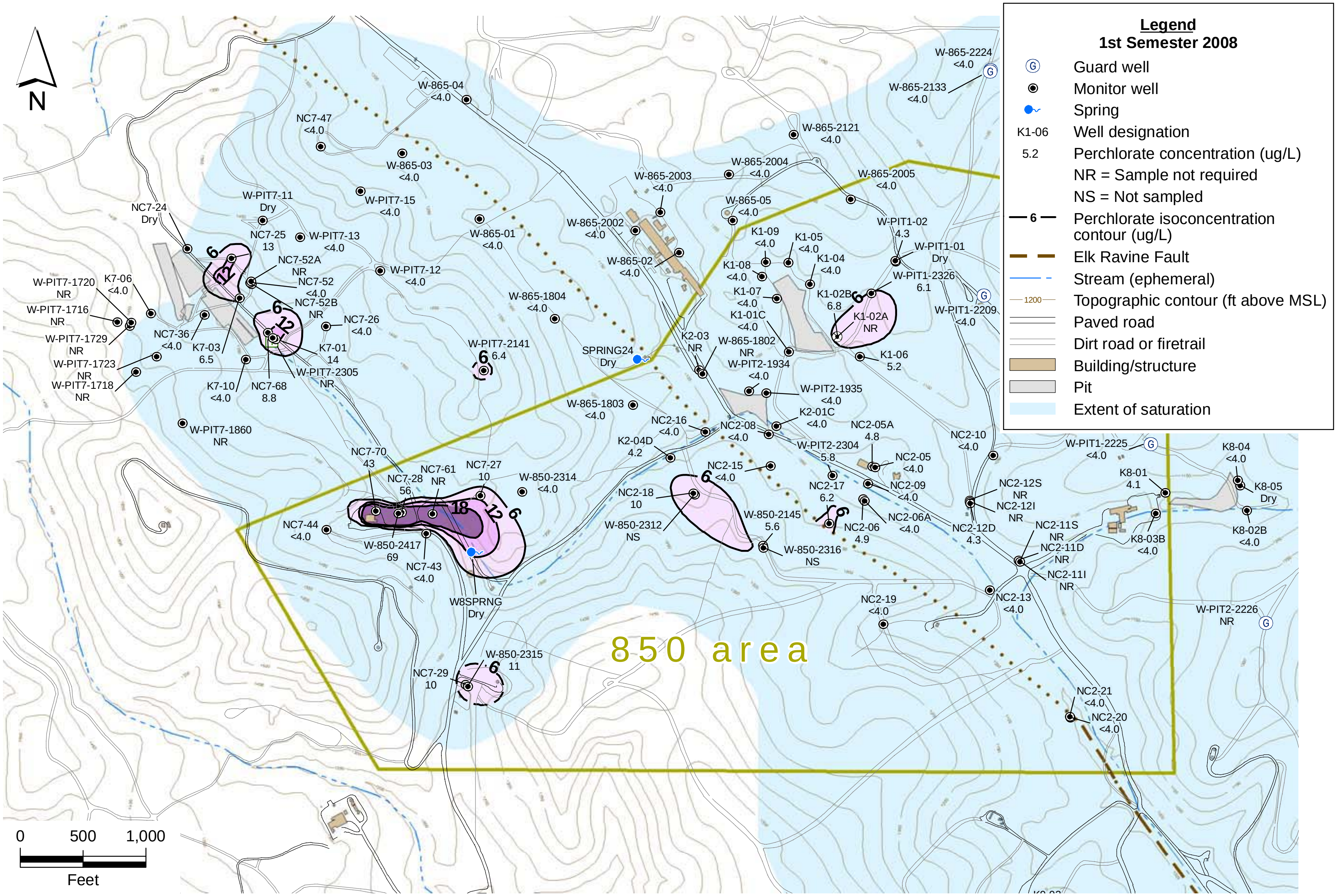


Figure 2.5-11. Building 850 area perchlorate isoconcentration contour map for the $Tnbs_1/Tnbs_0$ HSU.

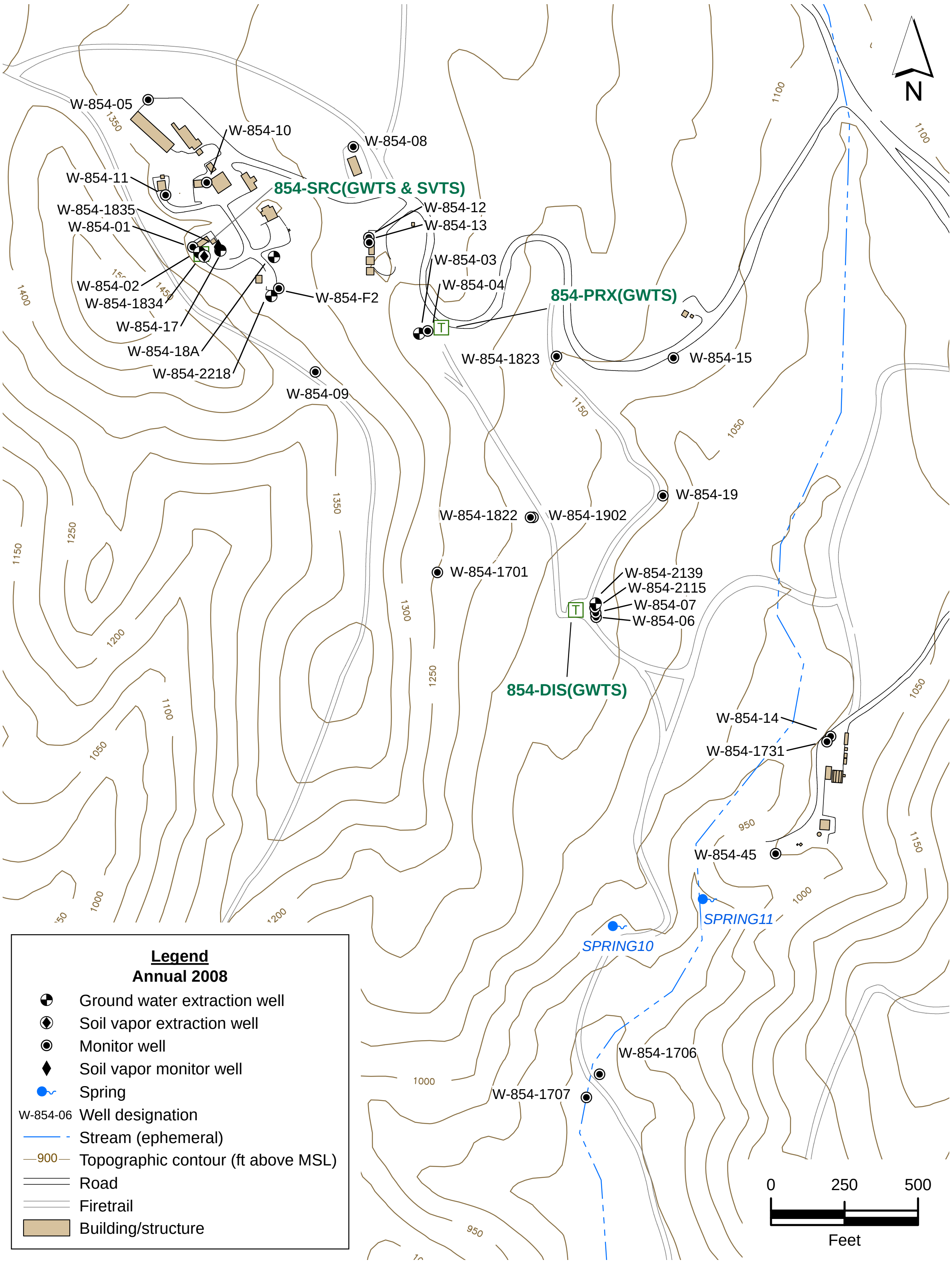


Figure 2.6-1. Building 854 OU site map showing monitor and extraction wells, and treatment facilities.

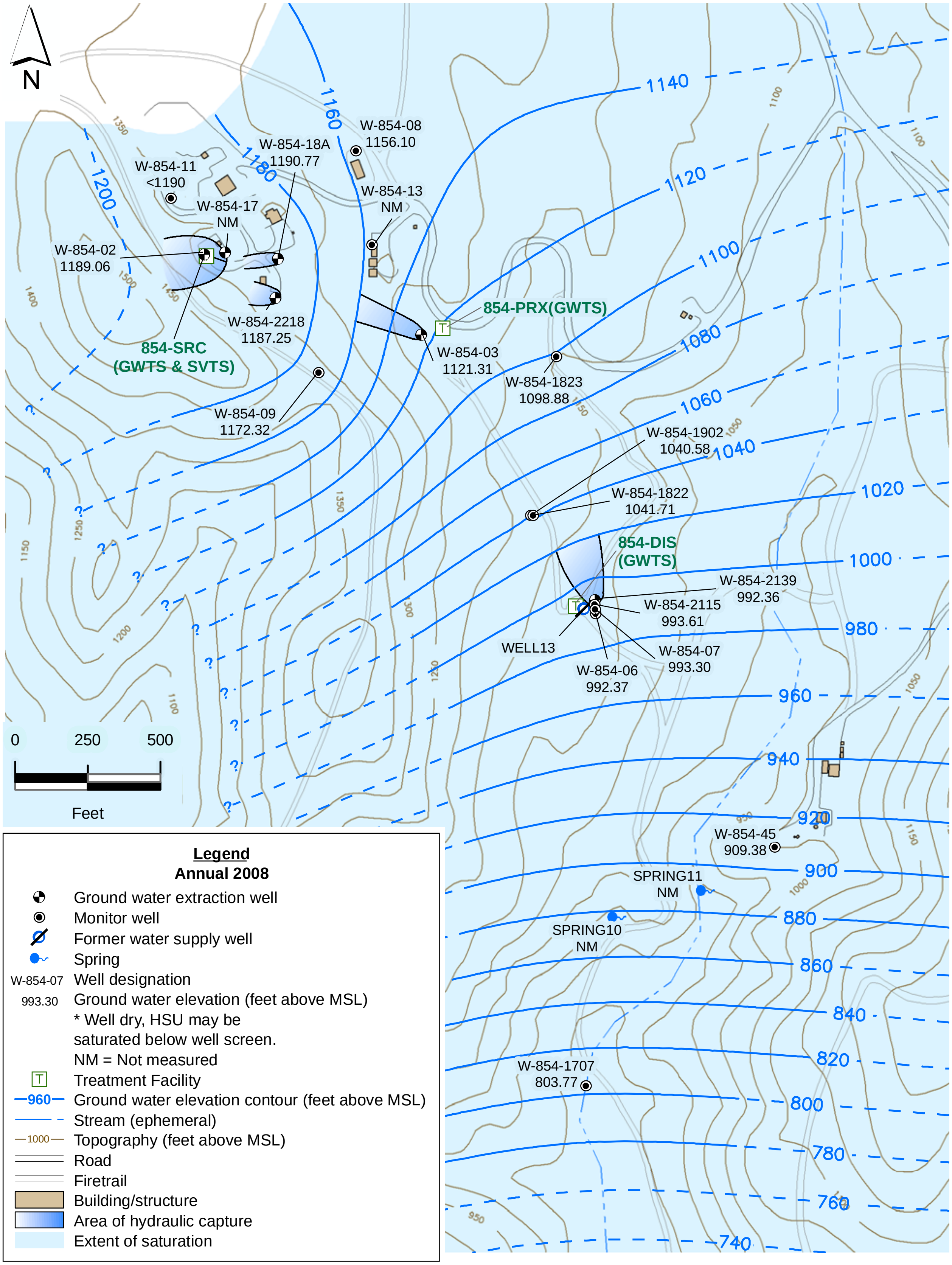


Figure 2.6-2. Building 854 OU ground water potentiometric surface map for the $Tnbs_1/Tnsc_0$ HSU.

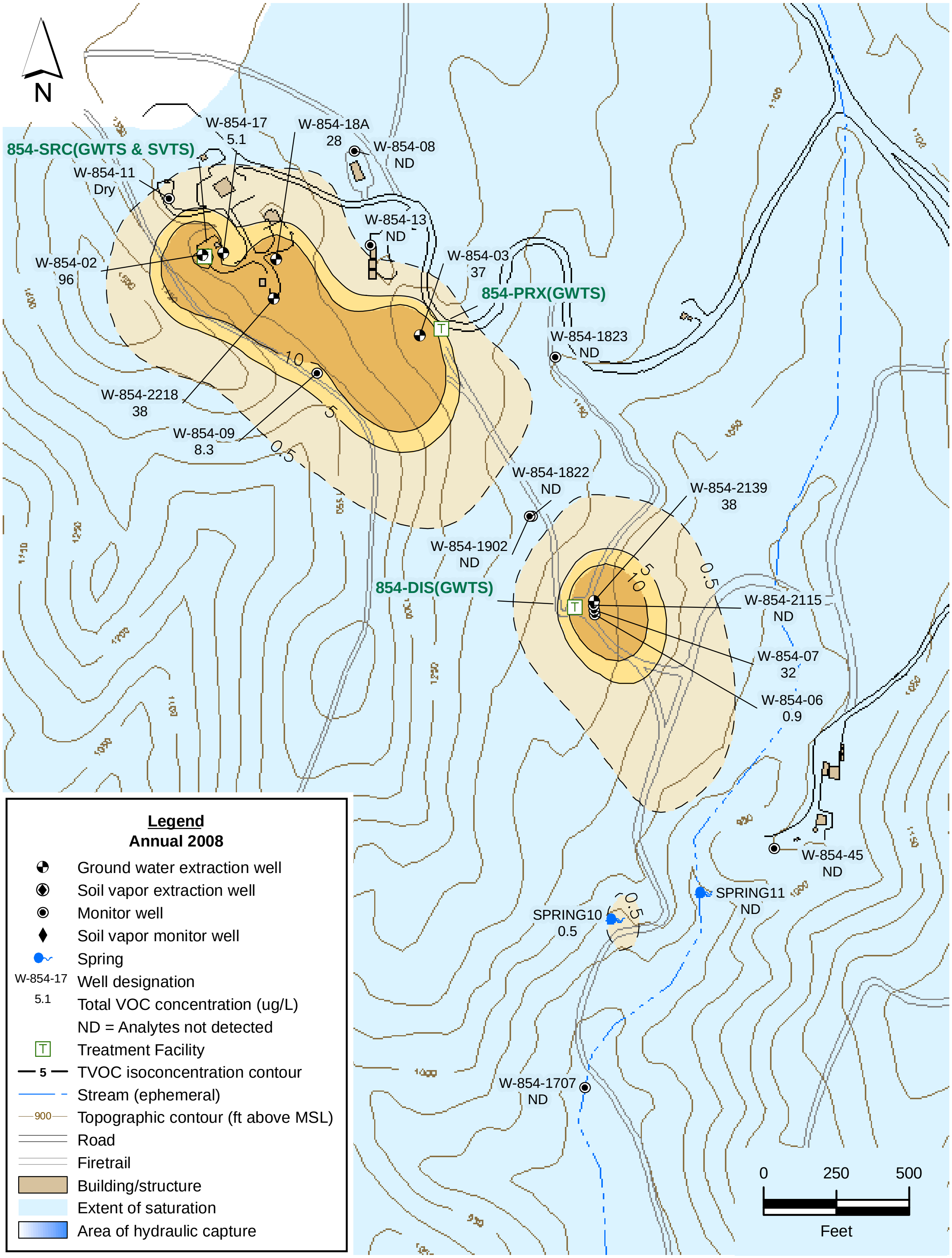


Figure 2.6-3. Building 854 OU total VOC isoconcentration contour map for the $Tnbs_1/Tnsc_0$ HSU.

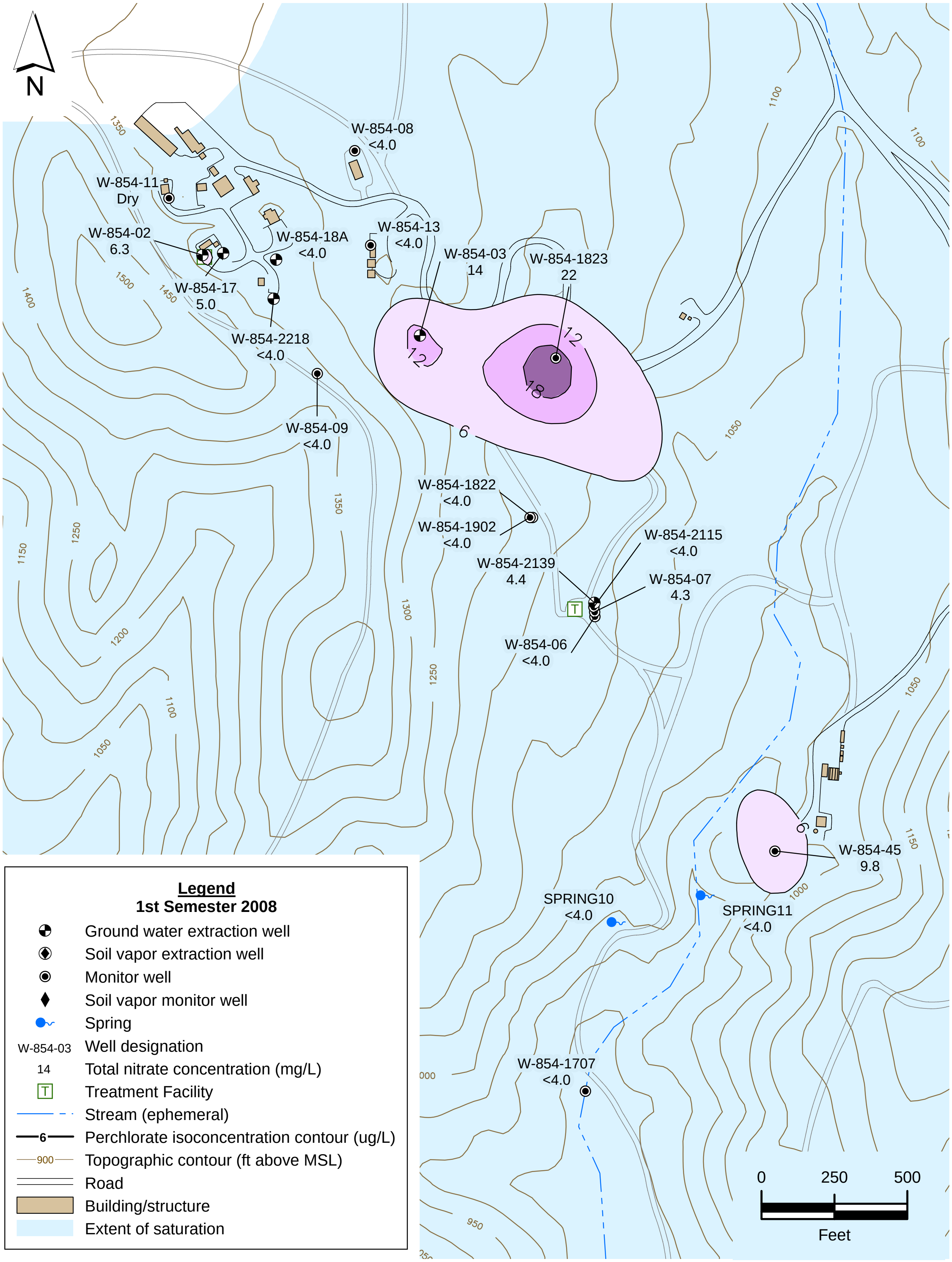


Figure 2.6-4. Building 854 OU perchlorate isoconcentration contour map for the $Tnbs_1/Tnsc_0$ HSU.

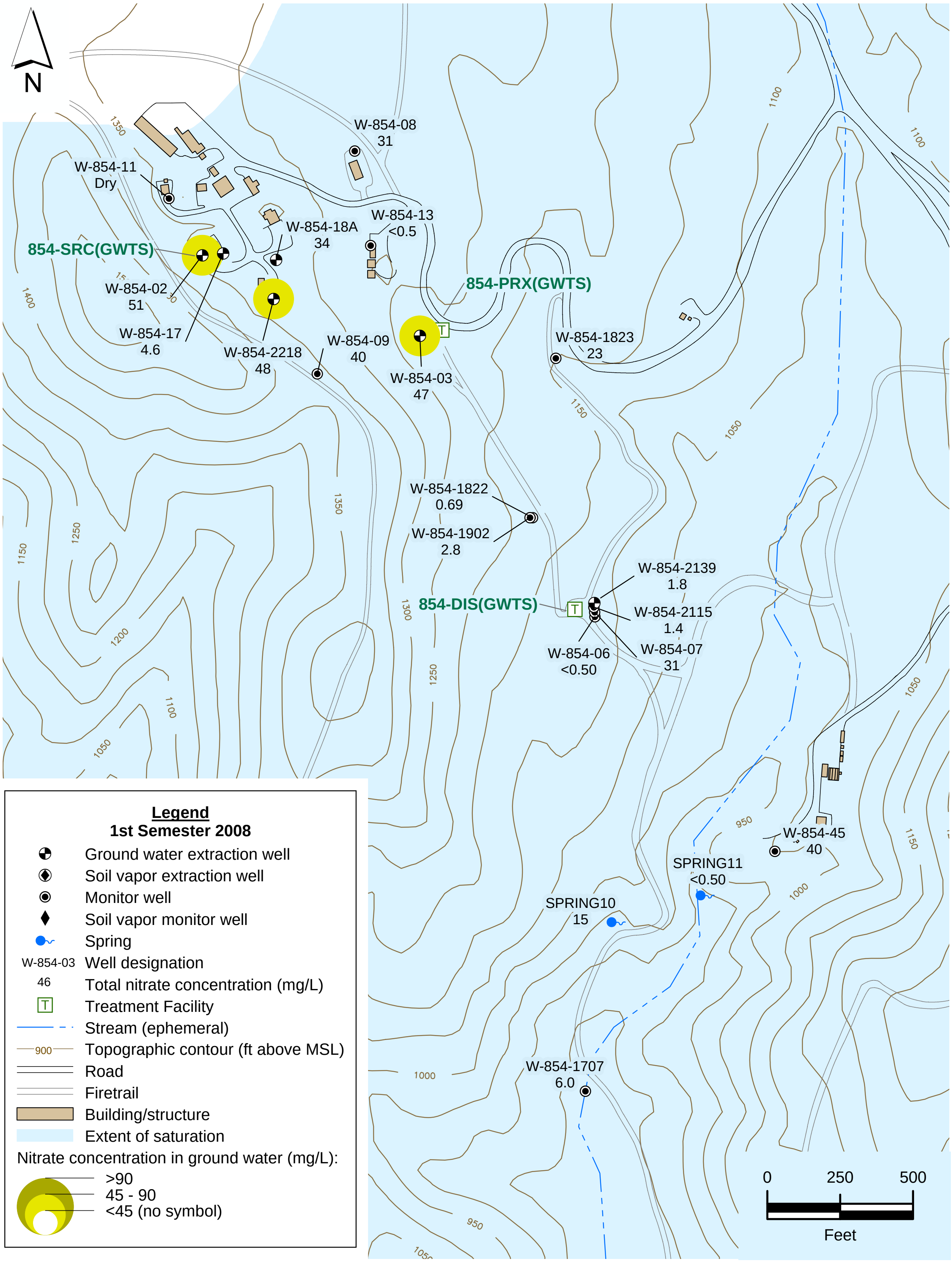


Figure 2.6-5. Building 854 OU map showing nitrate concentrations for the $Tnbs_1/Tnsc_0$ HSU.

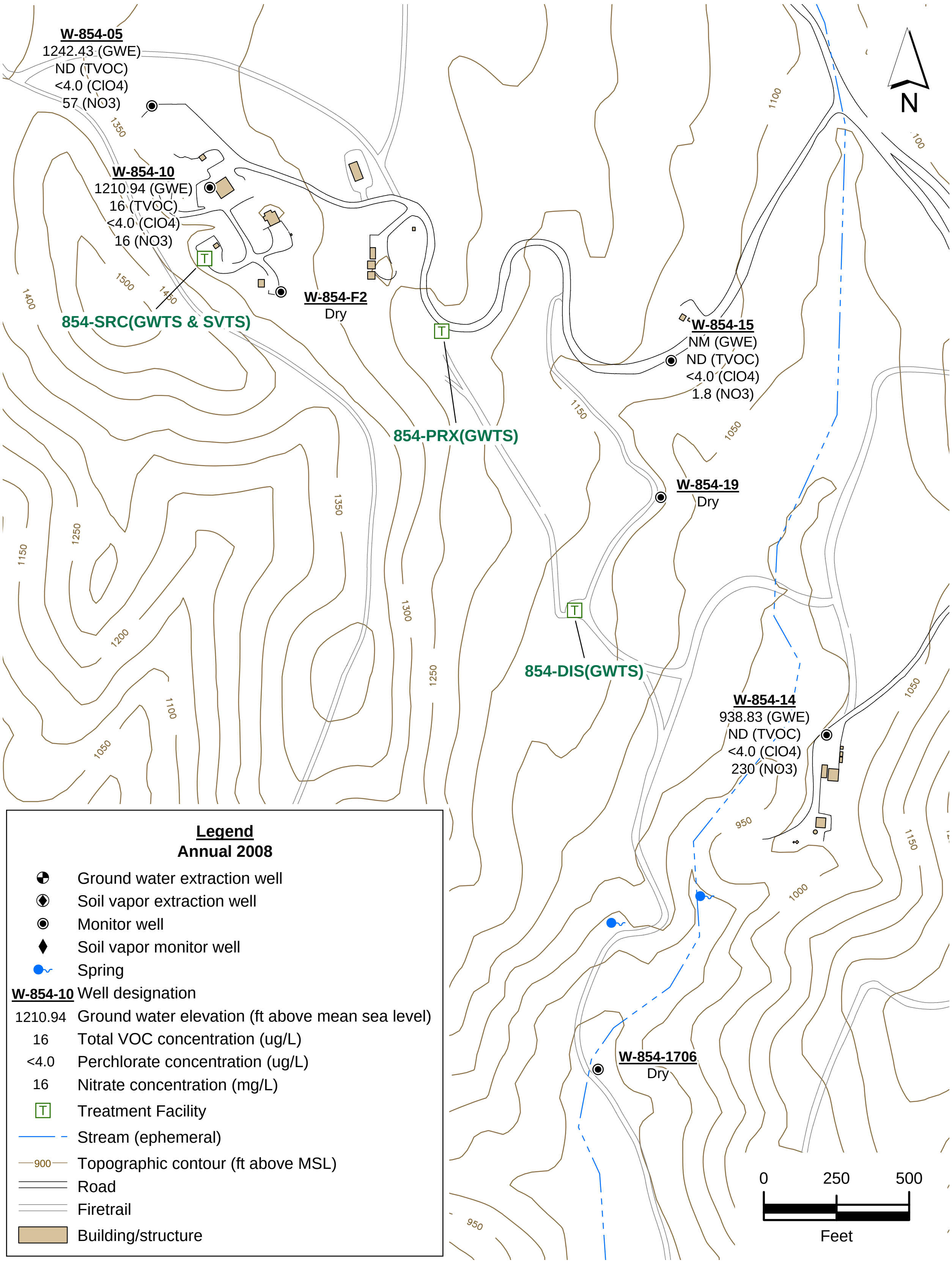


Figure 2.6-6. Building 854 OU map showing ground water elevations, total VOCs, perchlorate and nitrate concentrations for the combined Qls and $Tnbs_1$ HSUs.

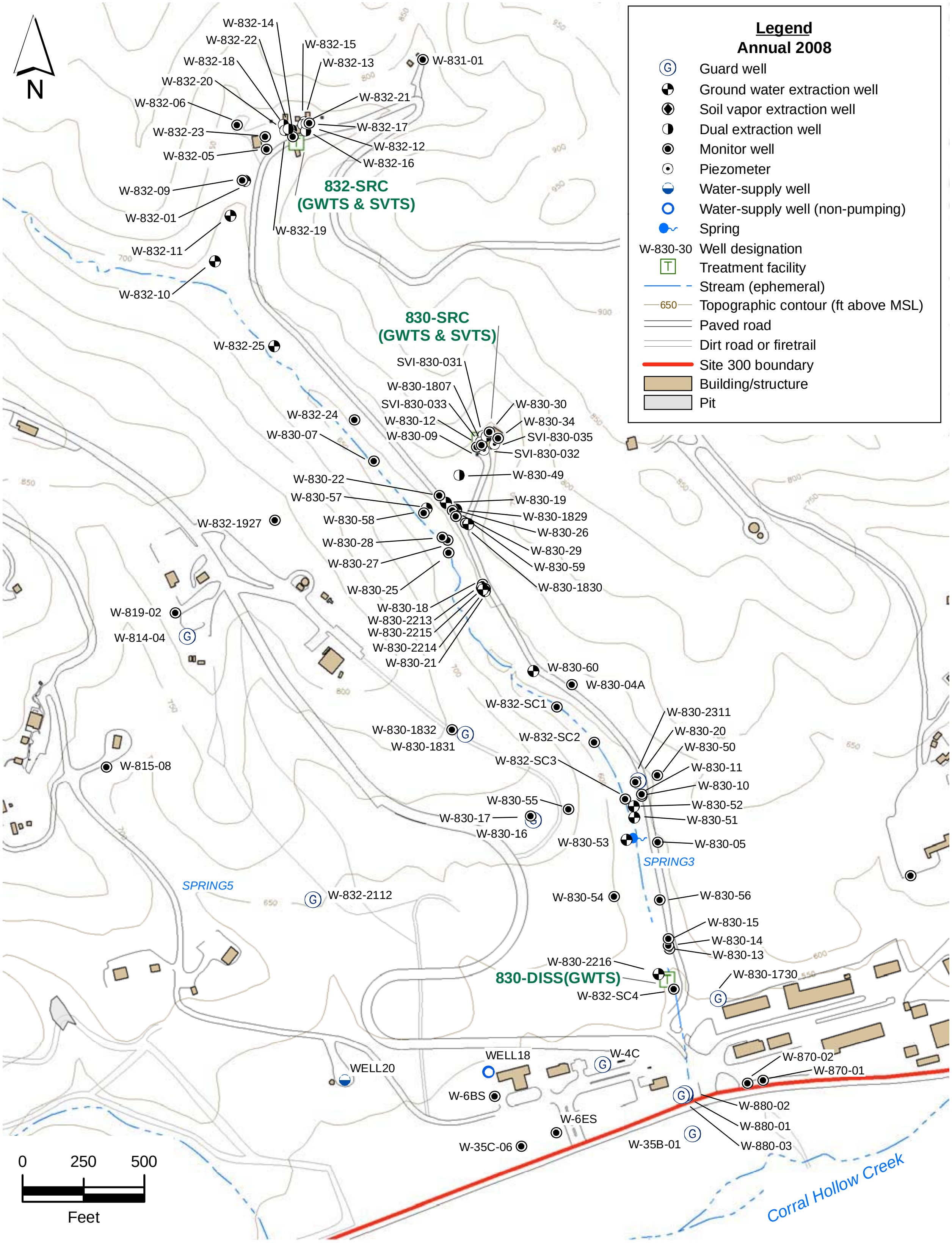


Figure 2.7-1. Building 832 Canyon OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

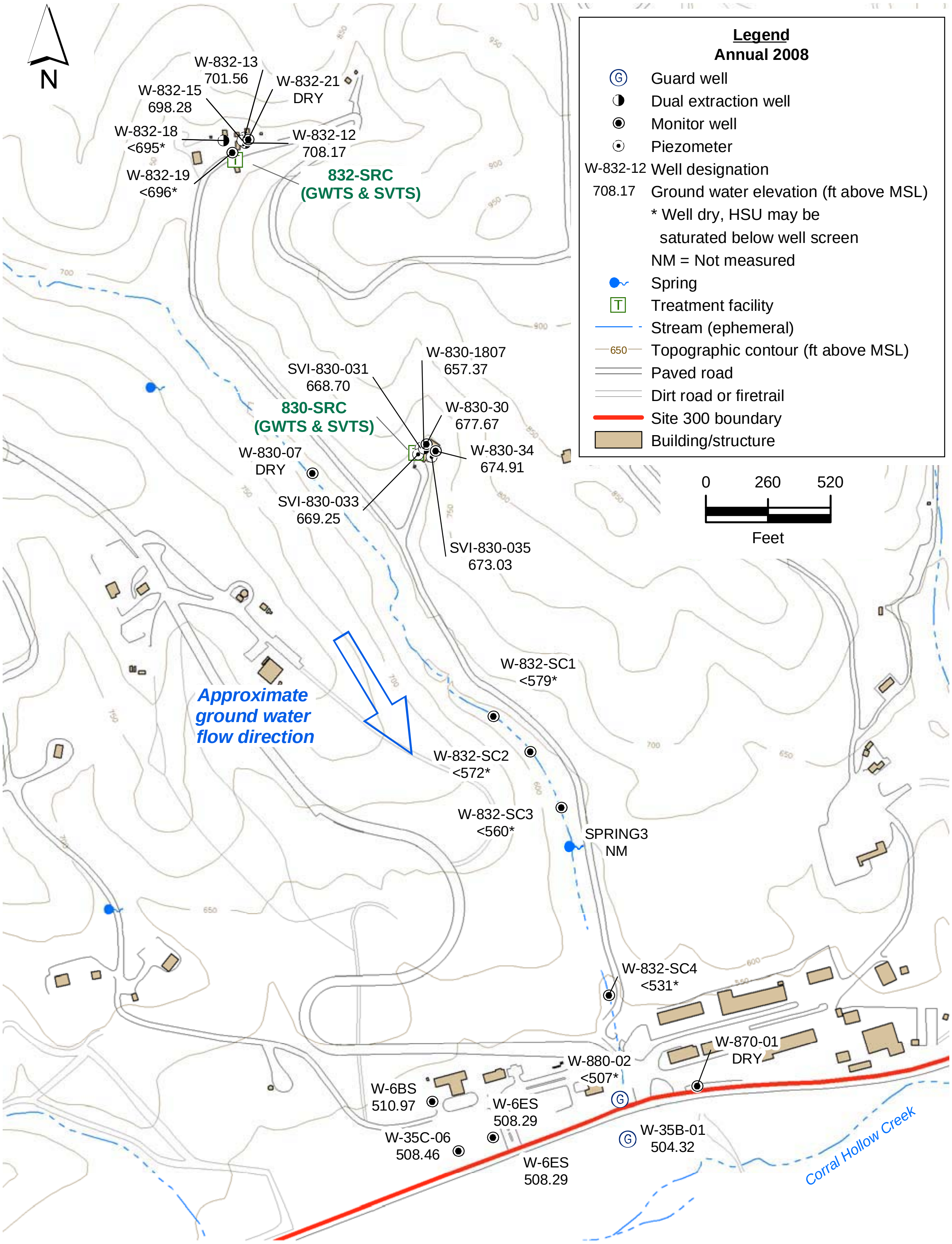


Figure 2.7-2. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Qal/WBR HSU.

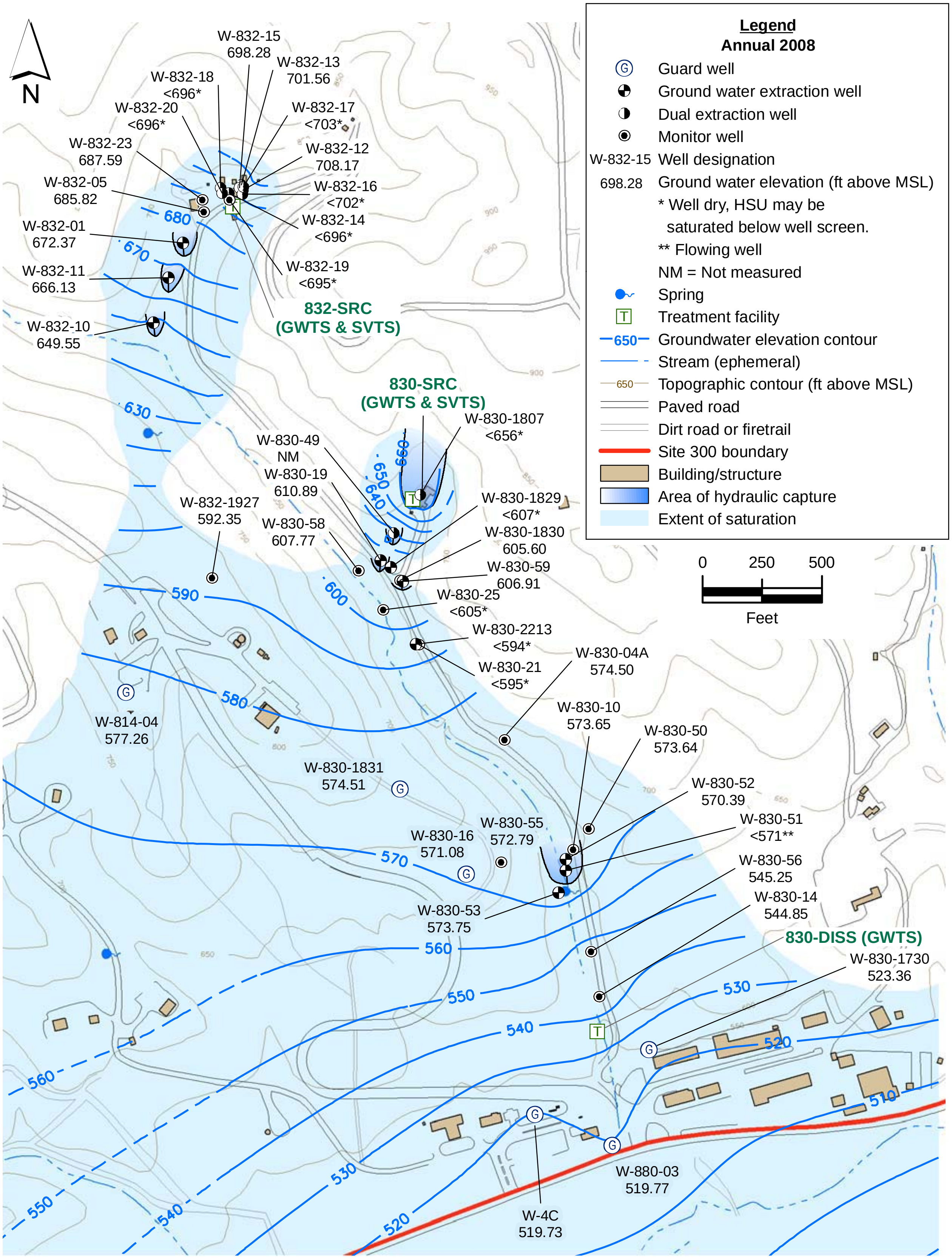


Figure 2.7-3. Building 832 Canyon OU ground water potentiometric surface map for the Tnsc$_{1b}$ HSU.

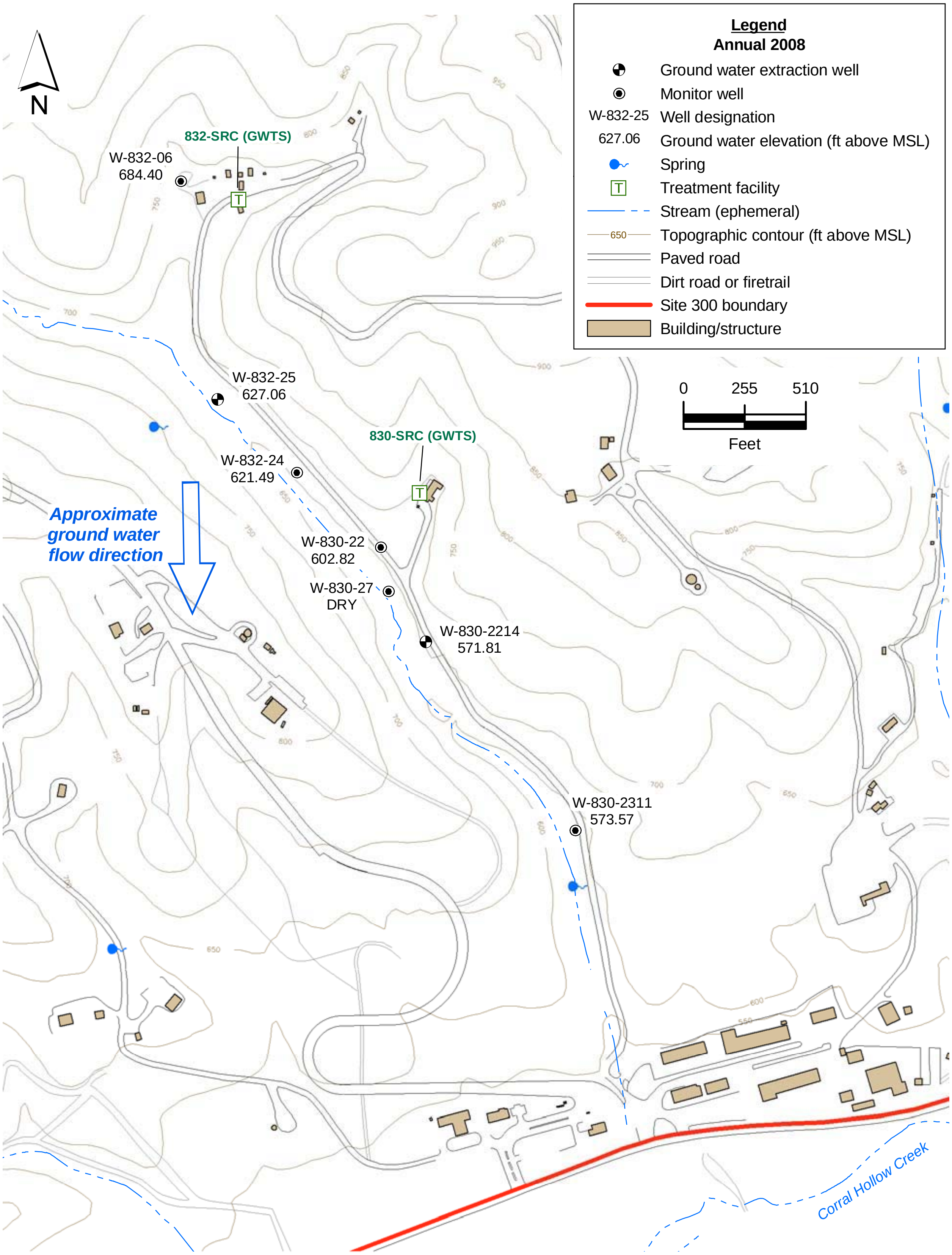


Figure 2.7-4. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Tnsc$_{1a}$ HSU.

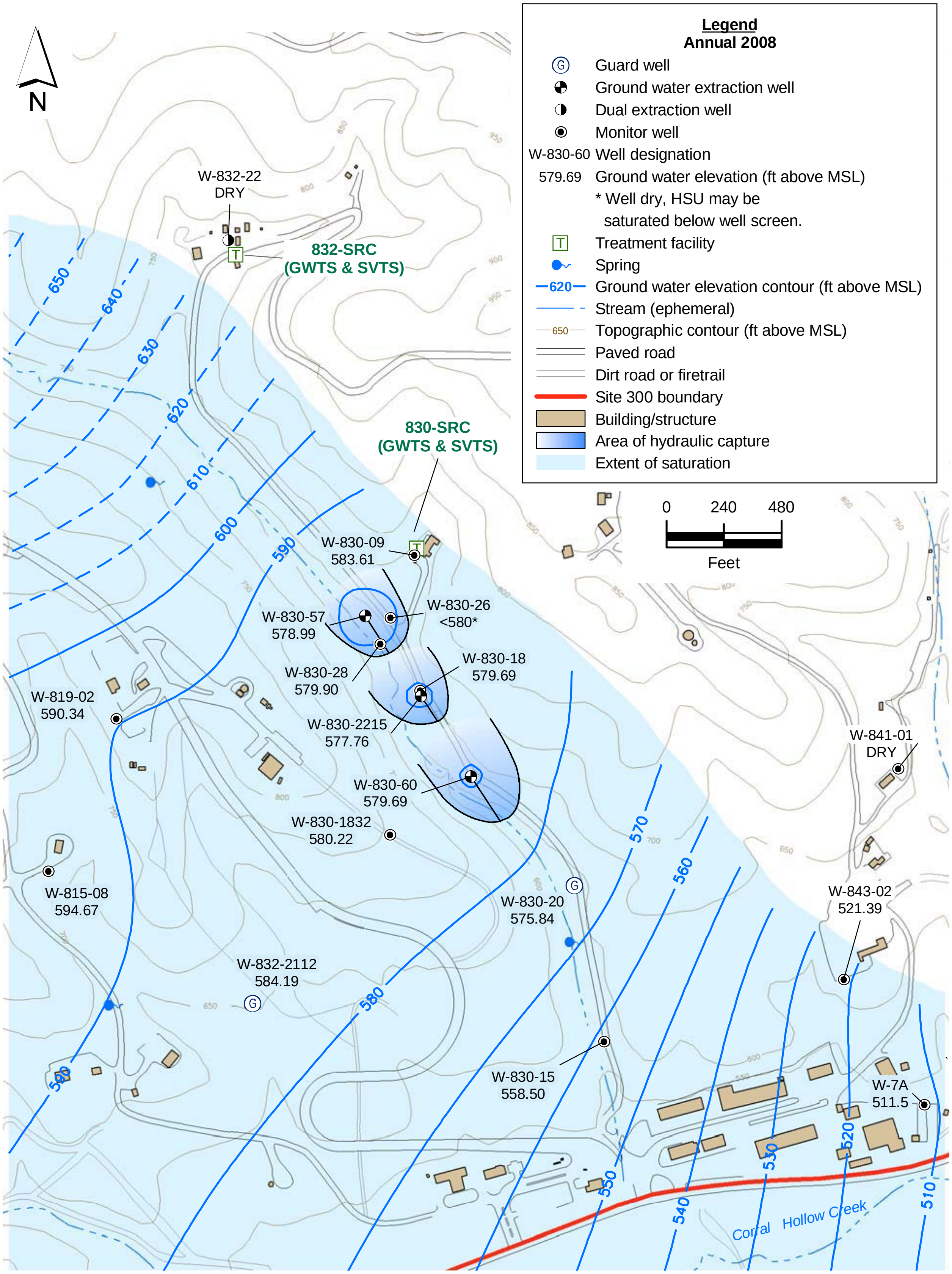


Figure 2.7-5. Building 832 Canyon OU ground water potentiometric surface map for the Upper $Tnbs_1$ HSU.

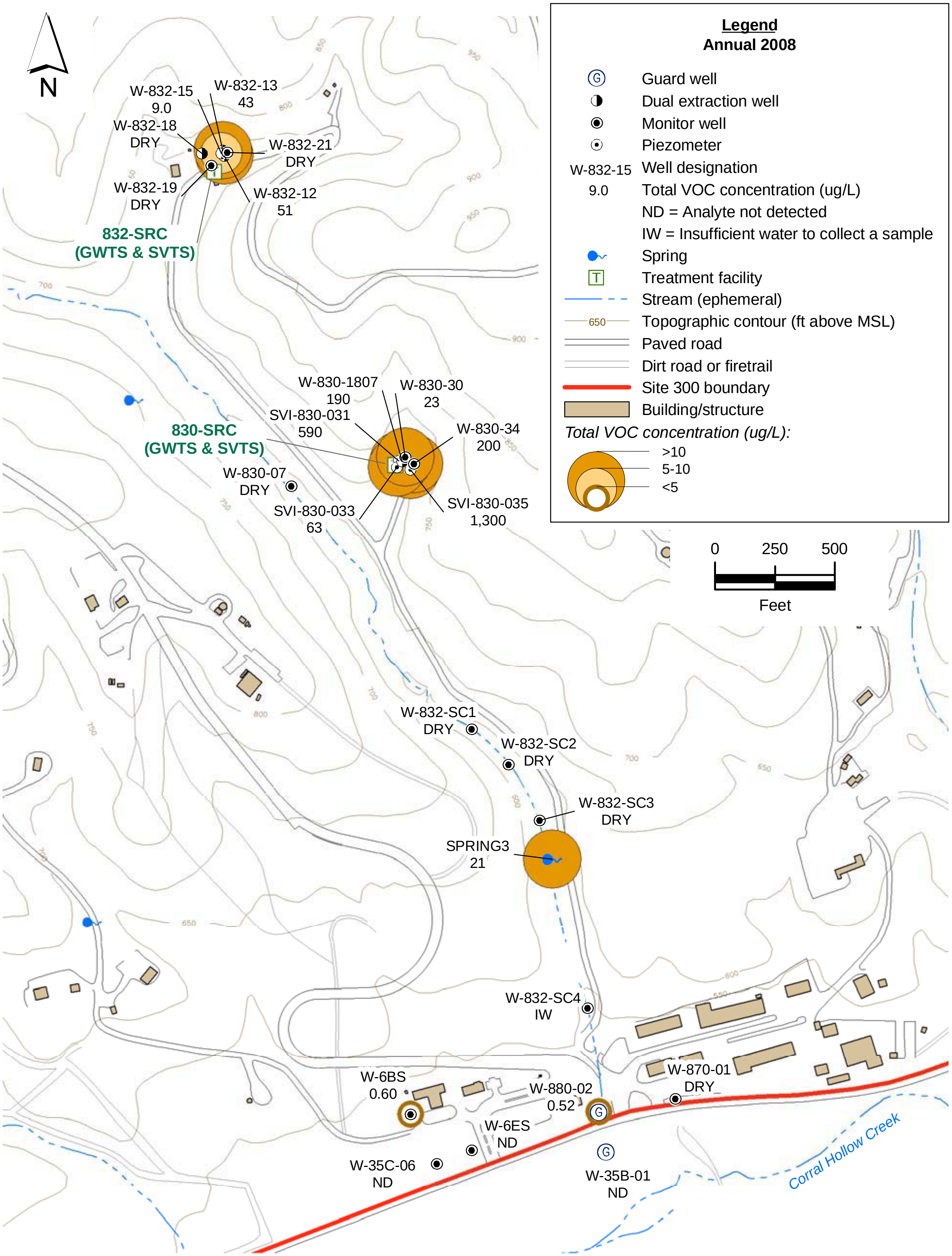


Figure 2.7-6. Building 832 Canyon OU map showing total VOC concentrations for the Qal/WBR HSU.

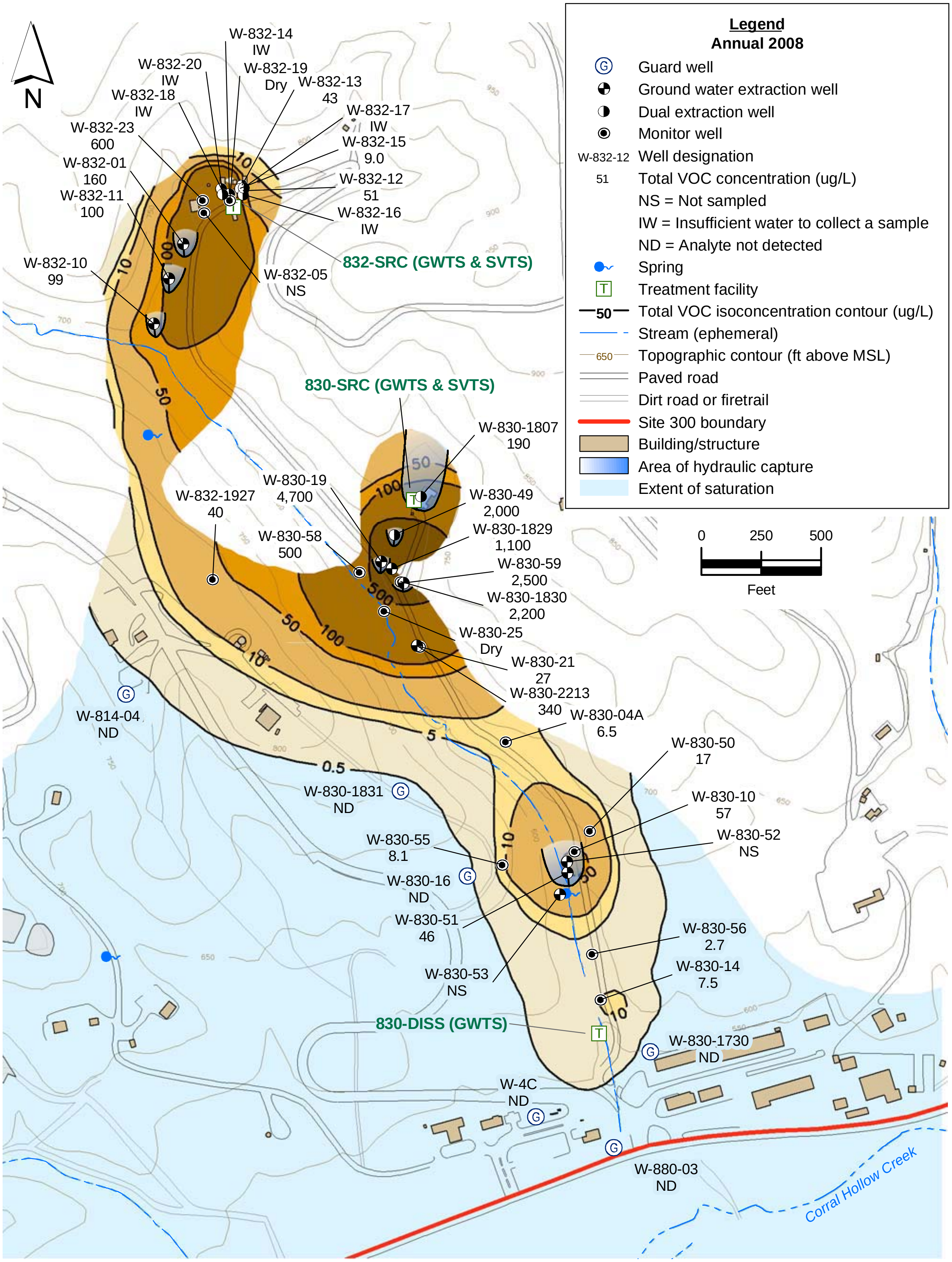


Figure 2.7-7. Building 832 Canyon OU total VOC isoconcentration contour map for the Tnsc$_{1b}$ HSU.

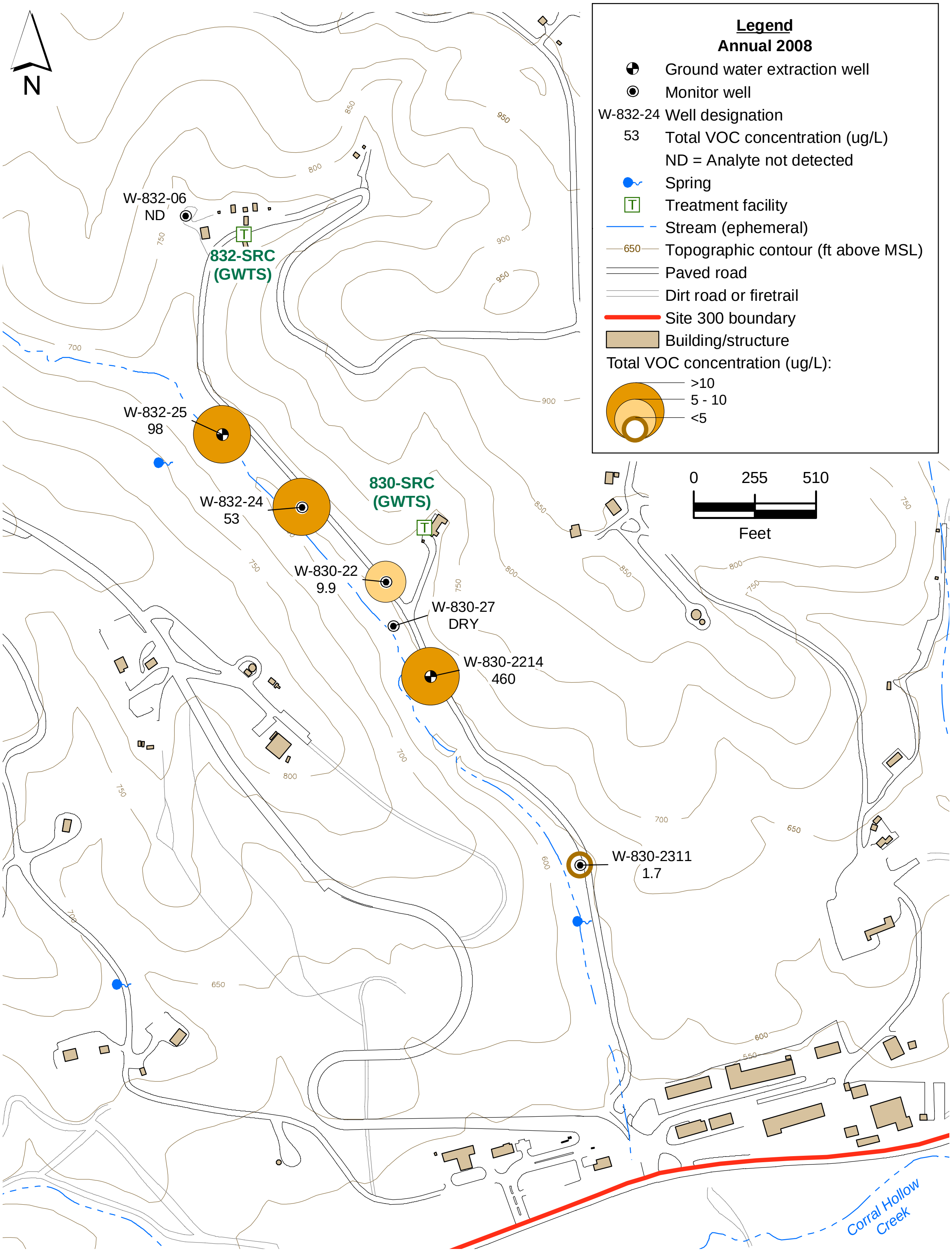


Figure 2.7-8. Building 832 Canyon OU map showing total VOC concentrations for the Tnsc$_{1a}$ HSU.

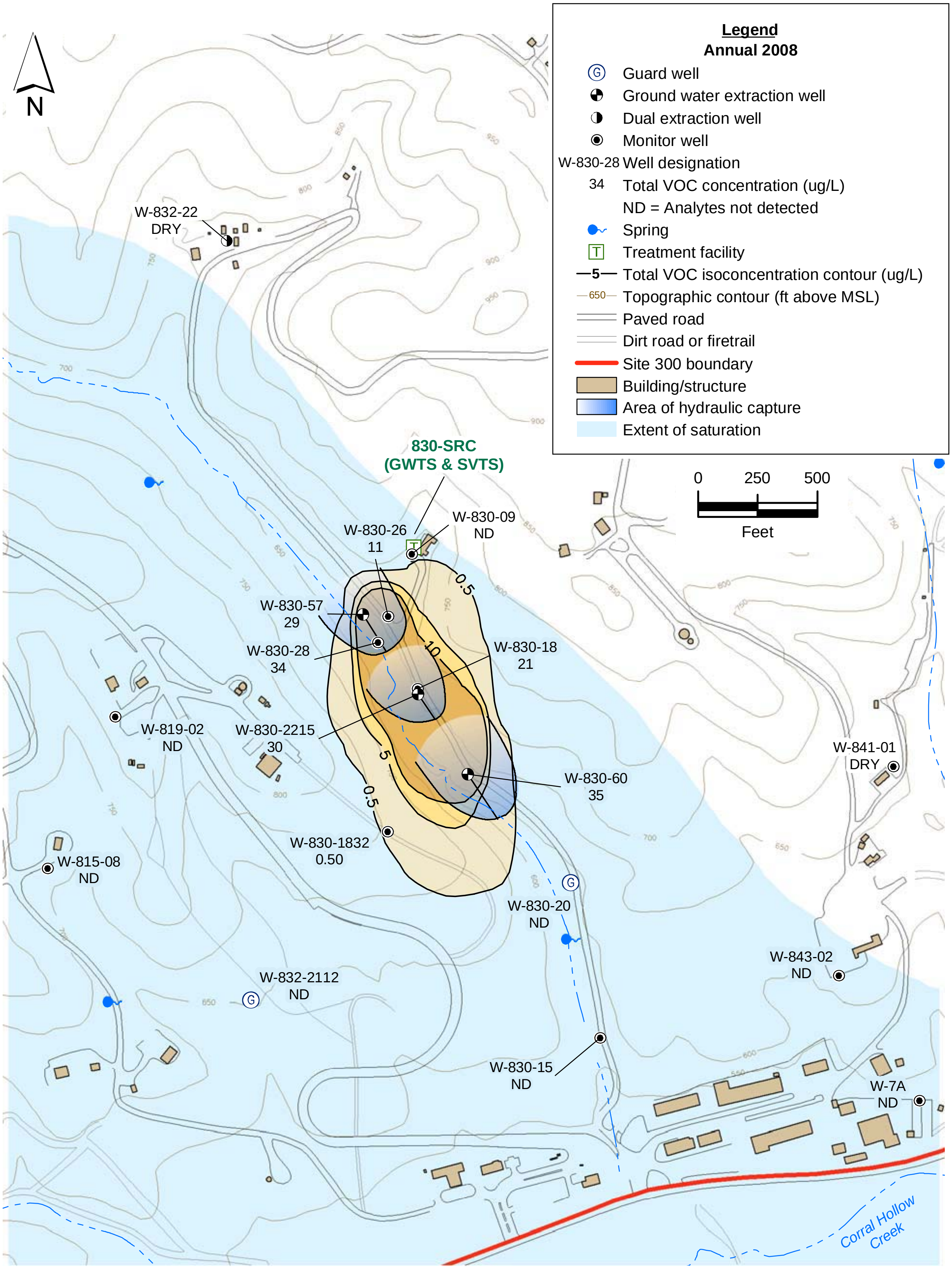


Figure 2.7-9. Building 832 Canyon OU total VOC isoconcentration contour map for the Upper Tnbs$_1$ HSU.

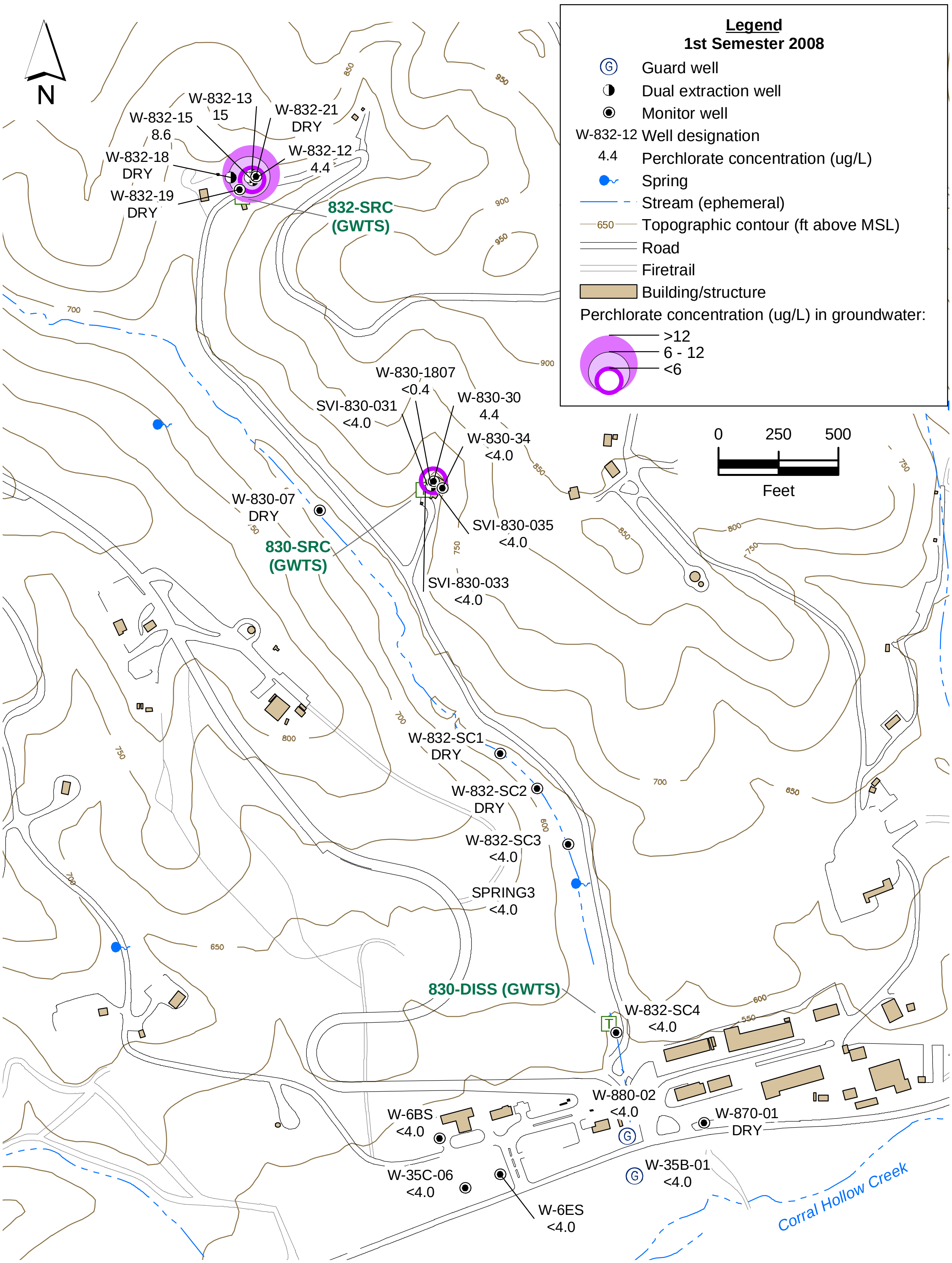


Figure 2.7-10. Building 832 Canyon OU map showing perchlorate concentrations for the Qal/WBR HSU.

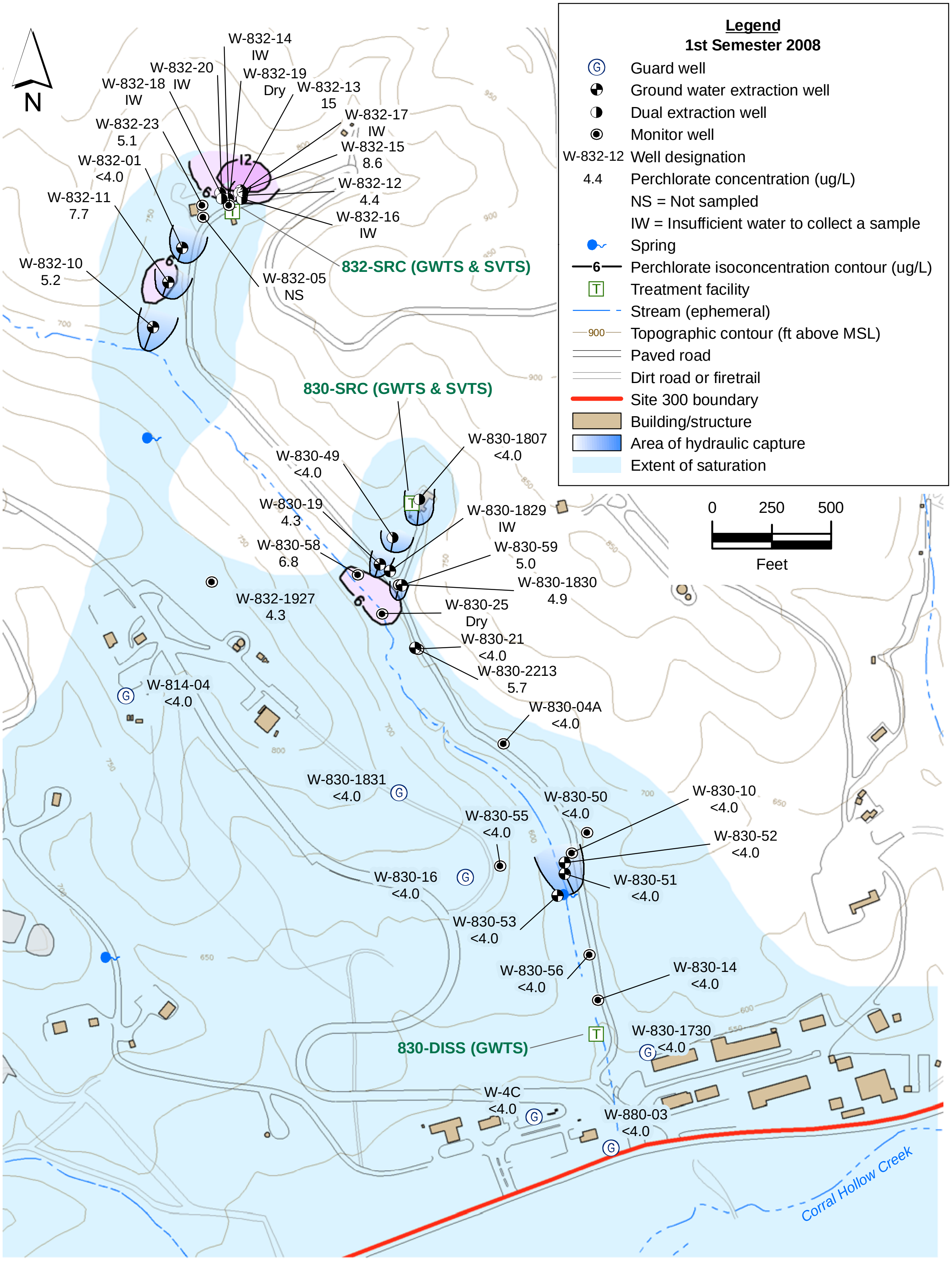


Figure 2.7-11. Building 832 Canyon OU perchlorate isoconcentration contour map for the $Tnsc_{1b}$ HSU.

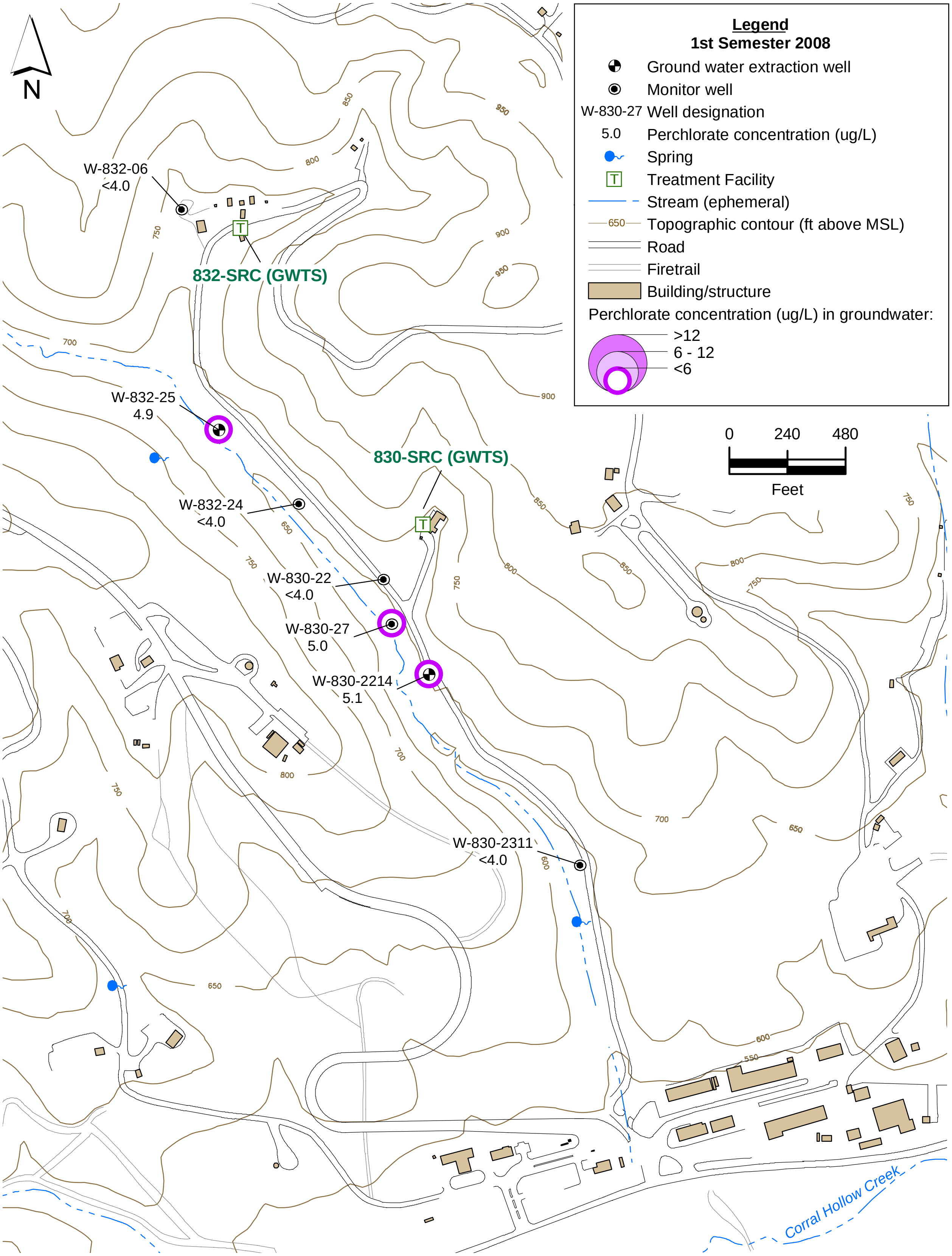


Figure 2.7-12. Building 832 Canyon OU map showing perchlorate concentrations for the Tnsc$_{1a}$ HSU.

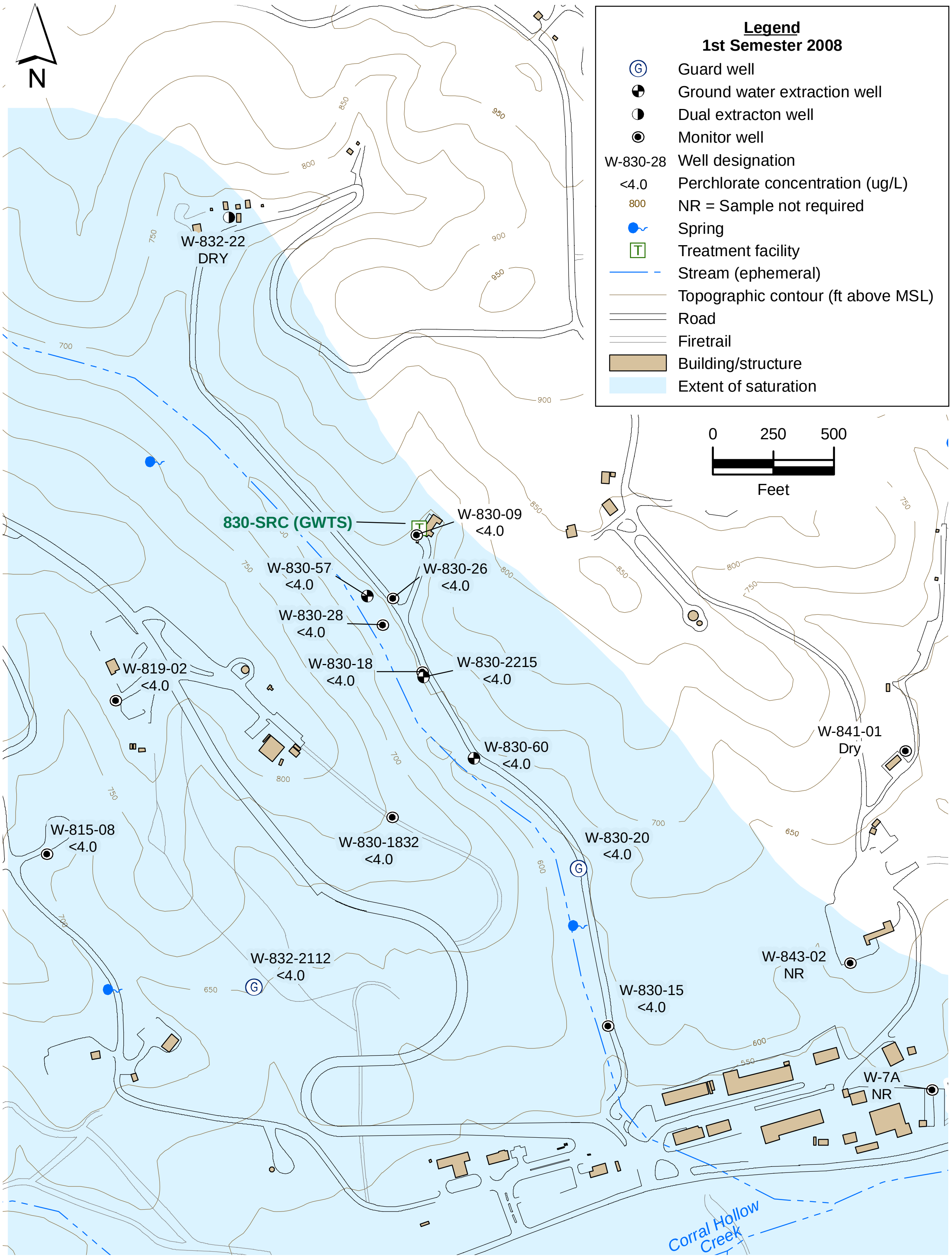


Figure 2.7-13. Building 832 Canyon OU map showing perchlorate concentrations for the Upper Tnbs$_1$ HSU.

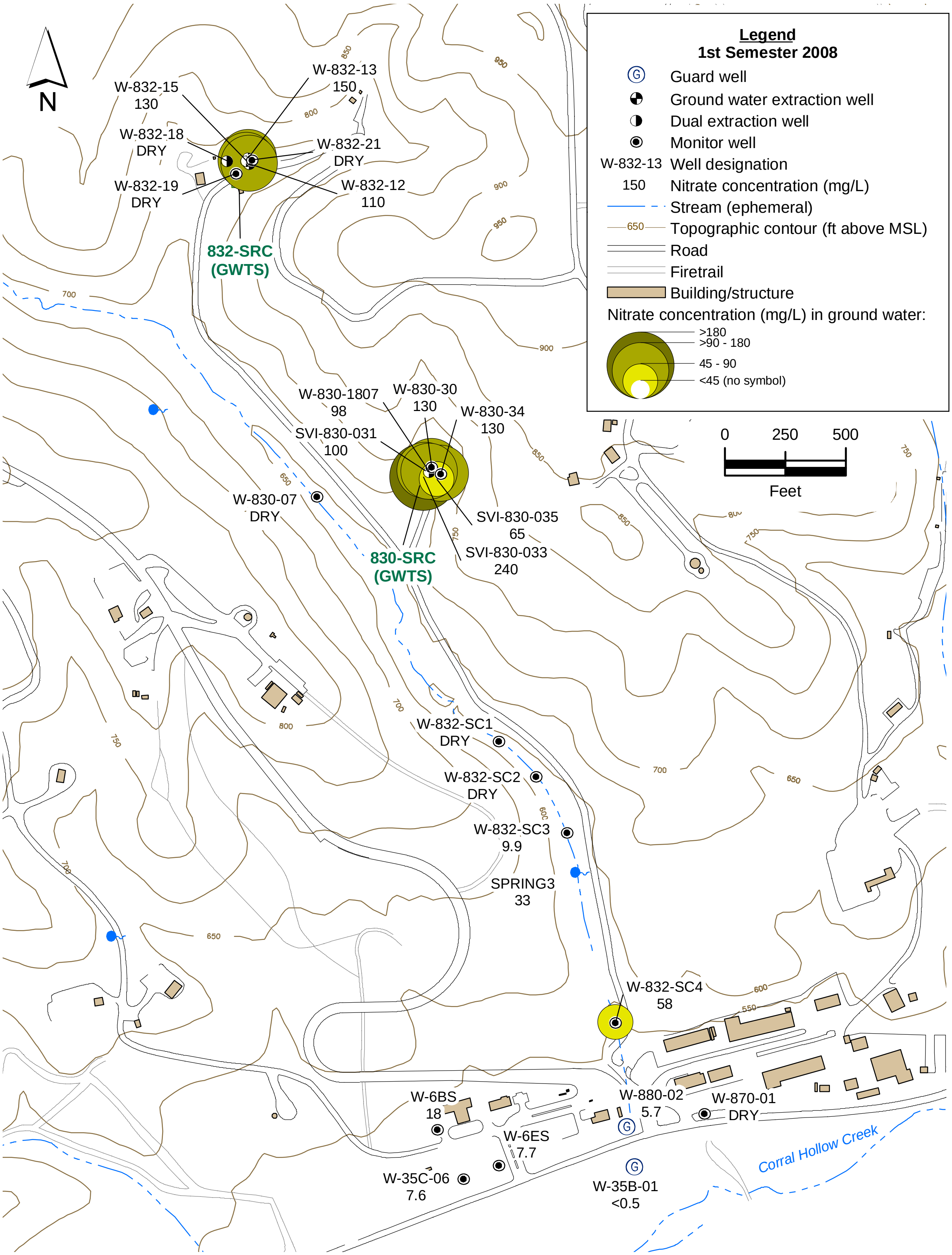


Figure 2.7-14. Building 832 Canyon OU map showing nitrate concentrations for the Qal/WBR HSU.

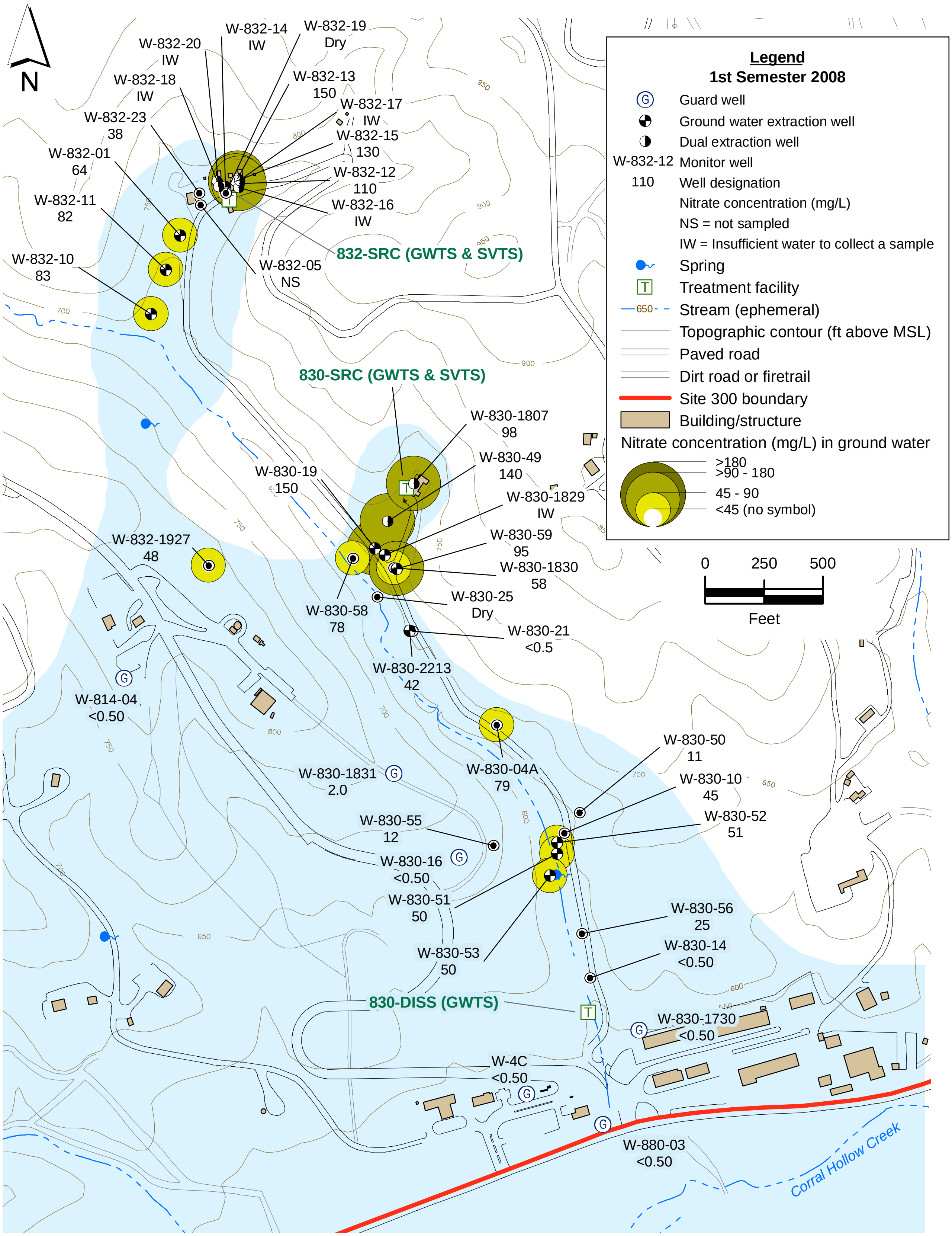


Figure 2.7-15. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc$_{1b}$ HSU.

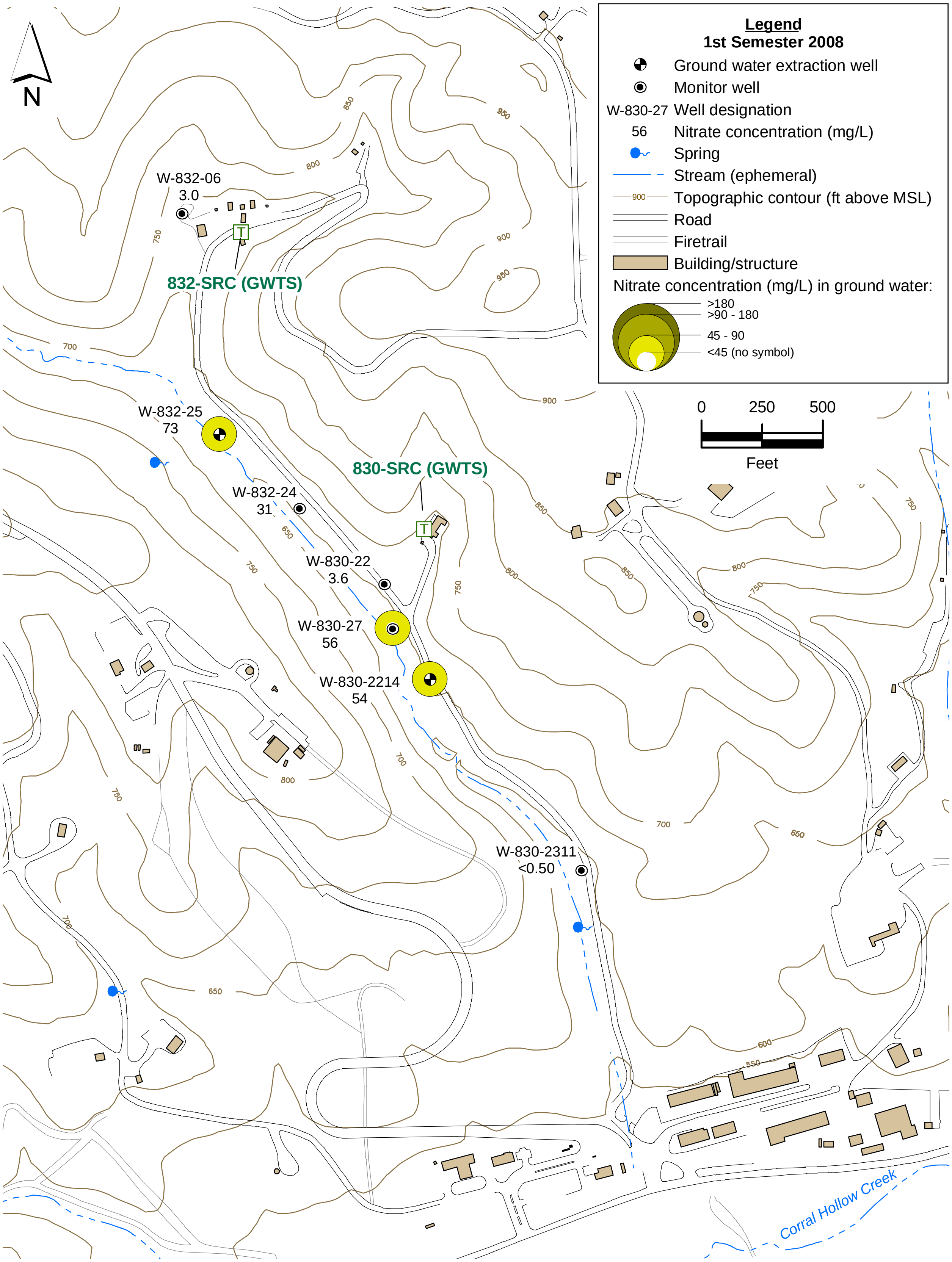


Figure 2.7-16. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc$_{1a}$ HSU.

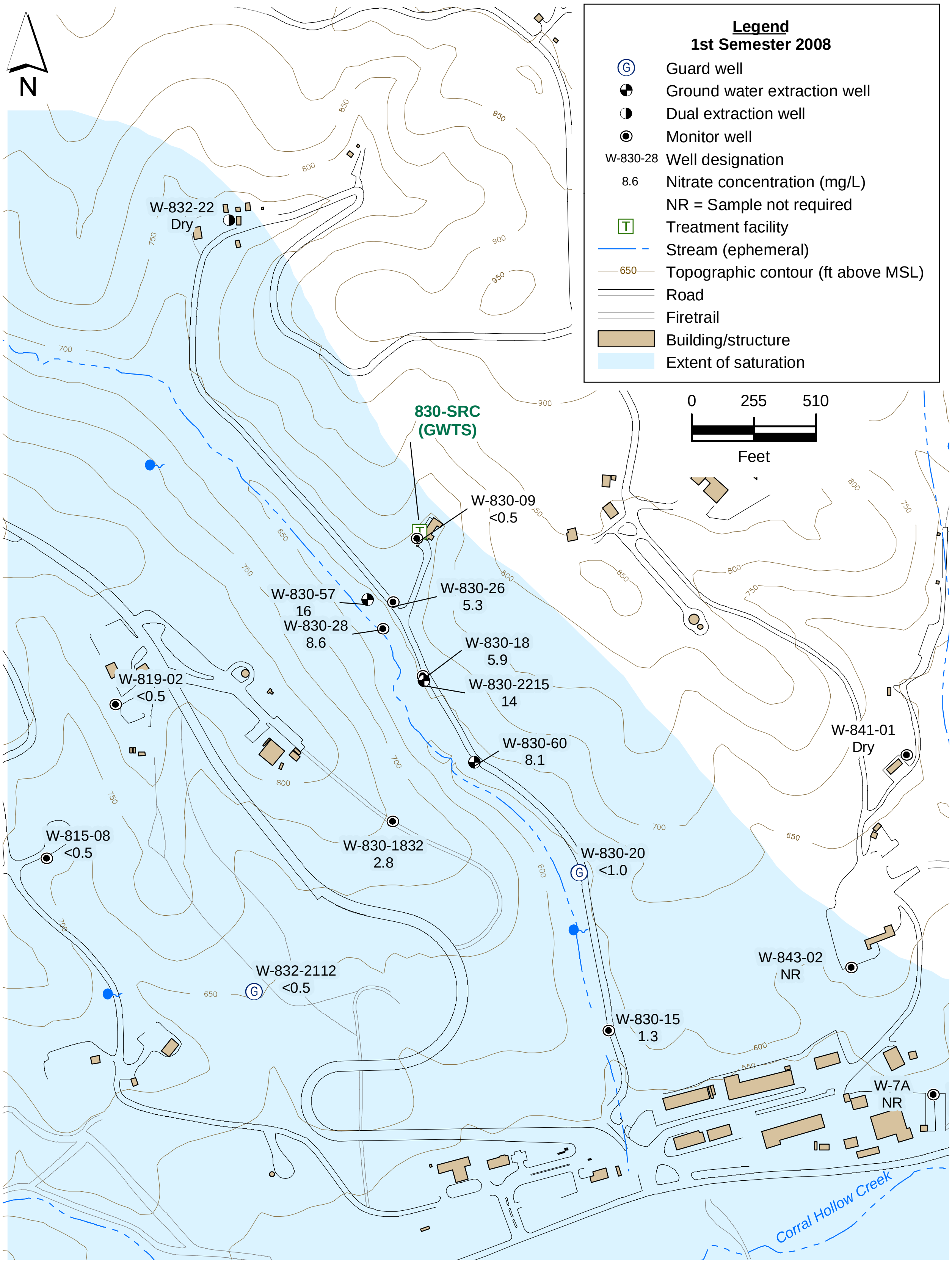


Figure 2.7-17. Building 832 Canyon OU map showing nitrate concentrations for the Upper $Tnbs_1$ HSU.

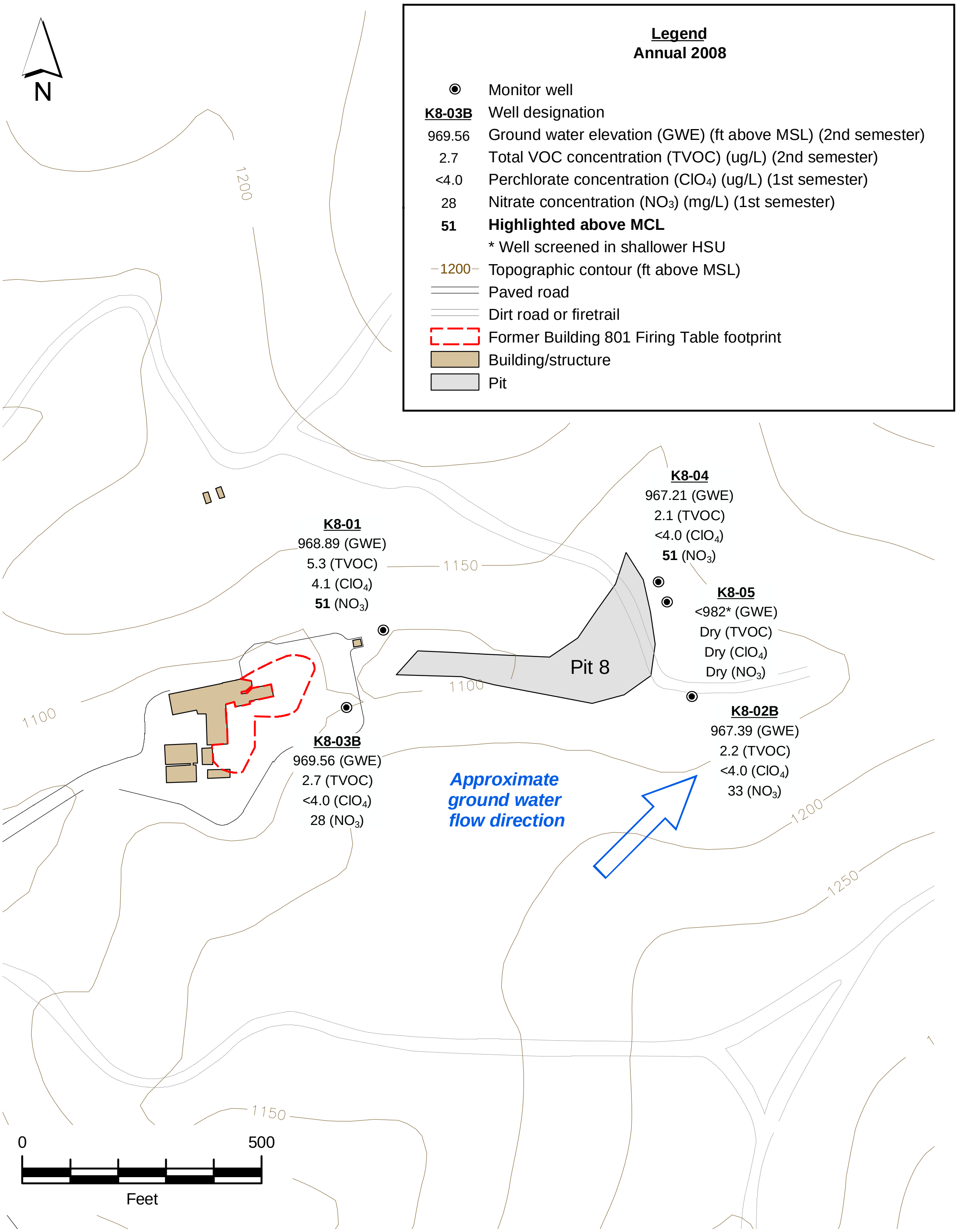


Figure 2.8-1. Building 801 Firing Table and Pit 8 Landfill site map showing monitor well locations, ground water elevations, nitrate, perchlorate and total VOC concentrations, and ground water flow direction in the $Tnbs_1/Tnbs_0$ HSU.

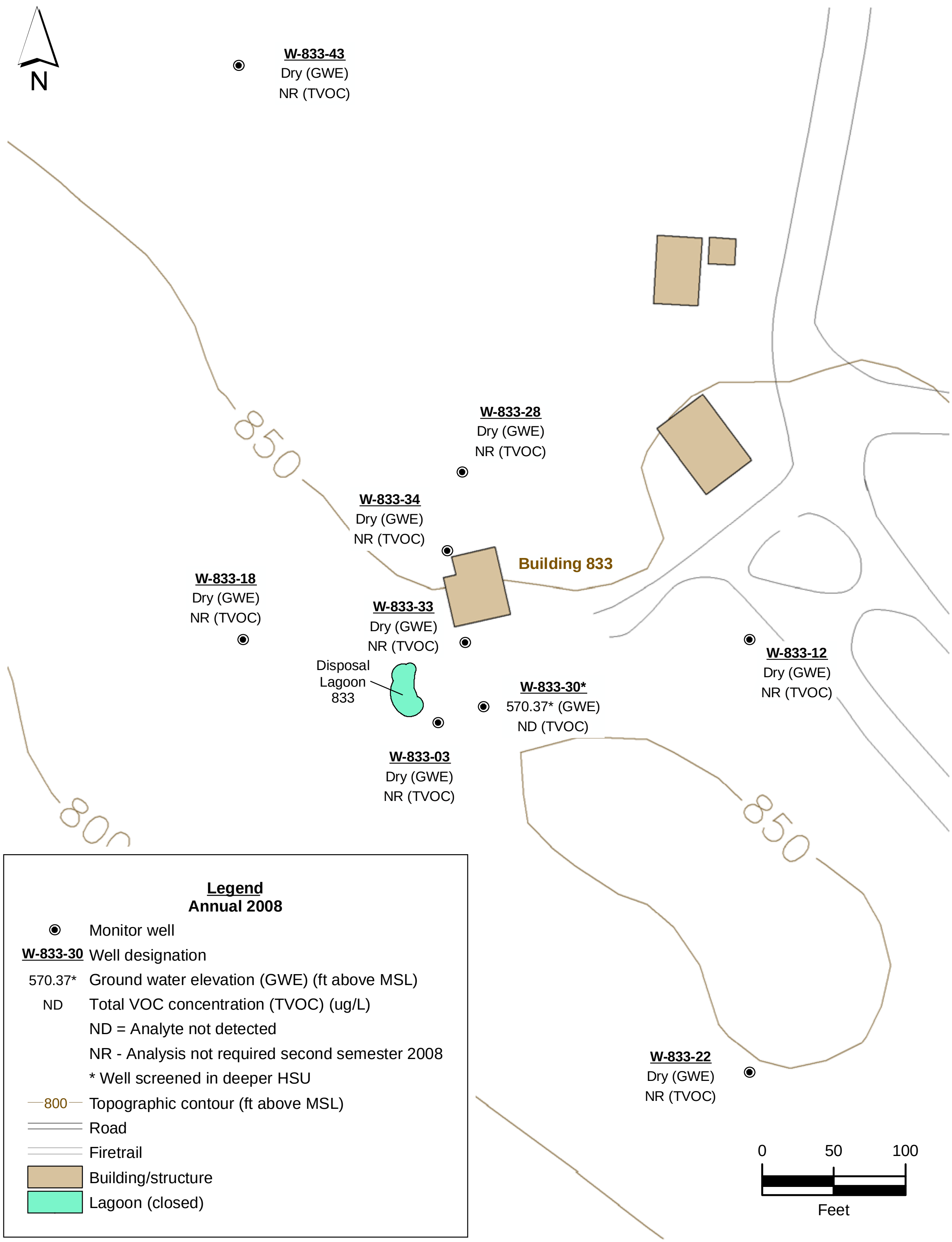


Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations and total VOC concentrations in the Tpsg HSU.

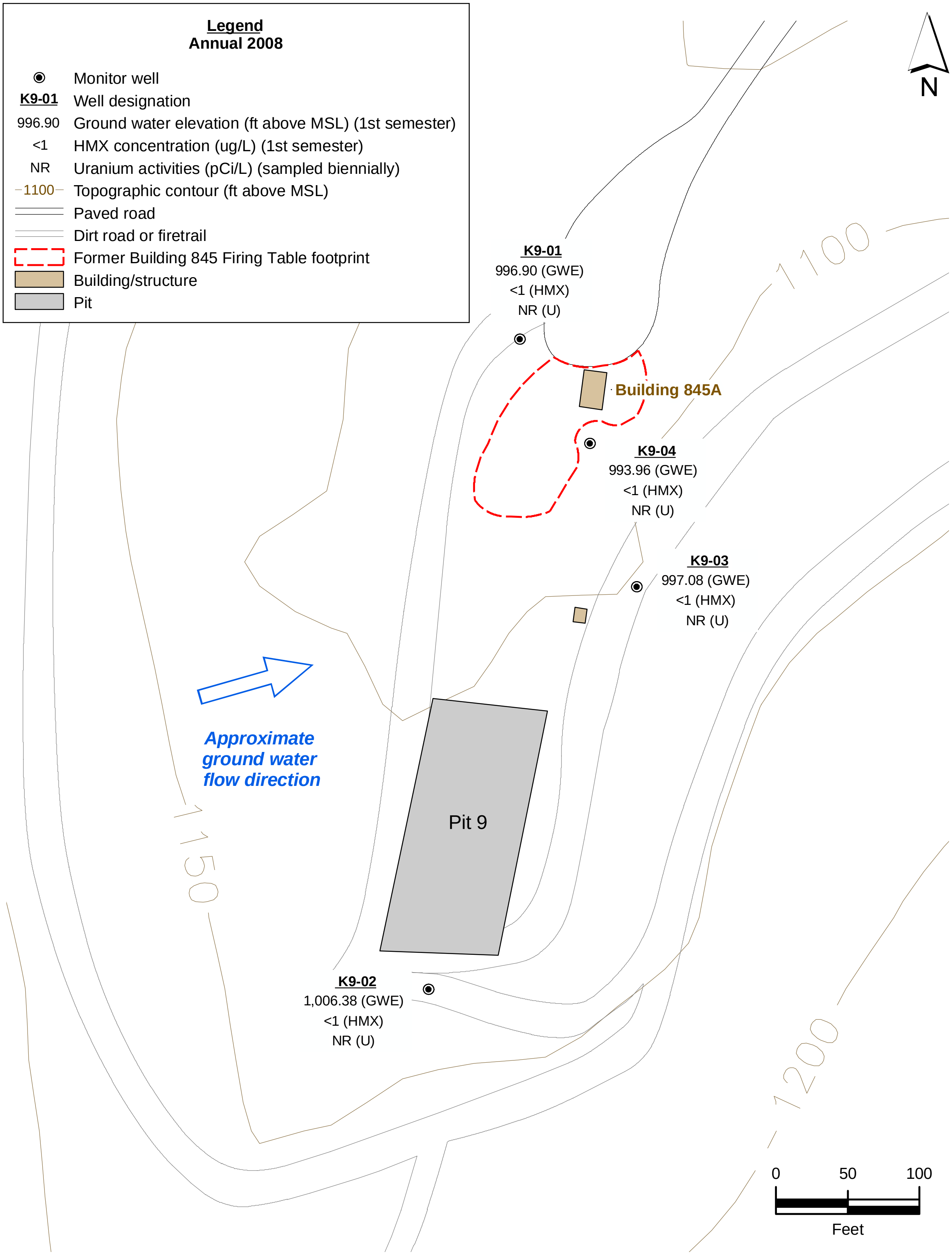


Figure 2.8-3. Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, ground water flow direction, HMX concentrations and uranium activities in the Tnsc$_0$ HSU.

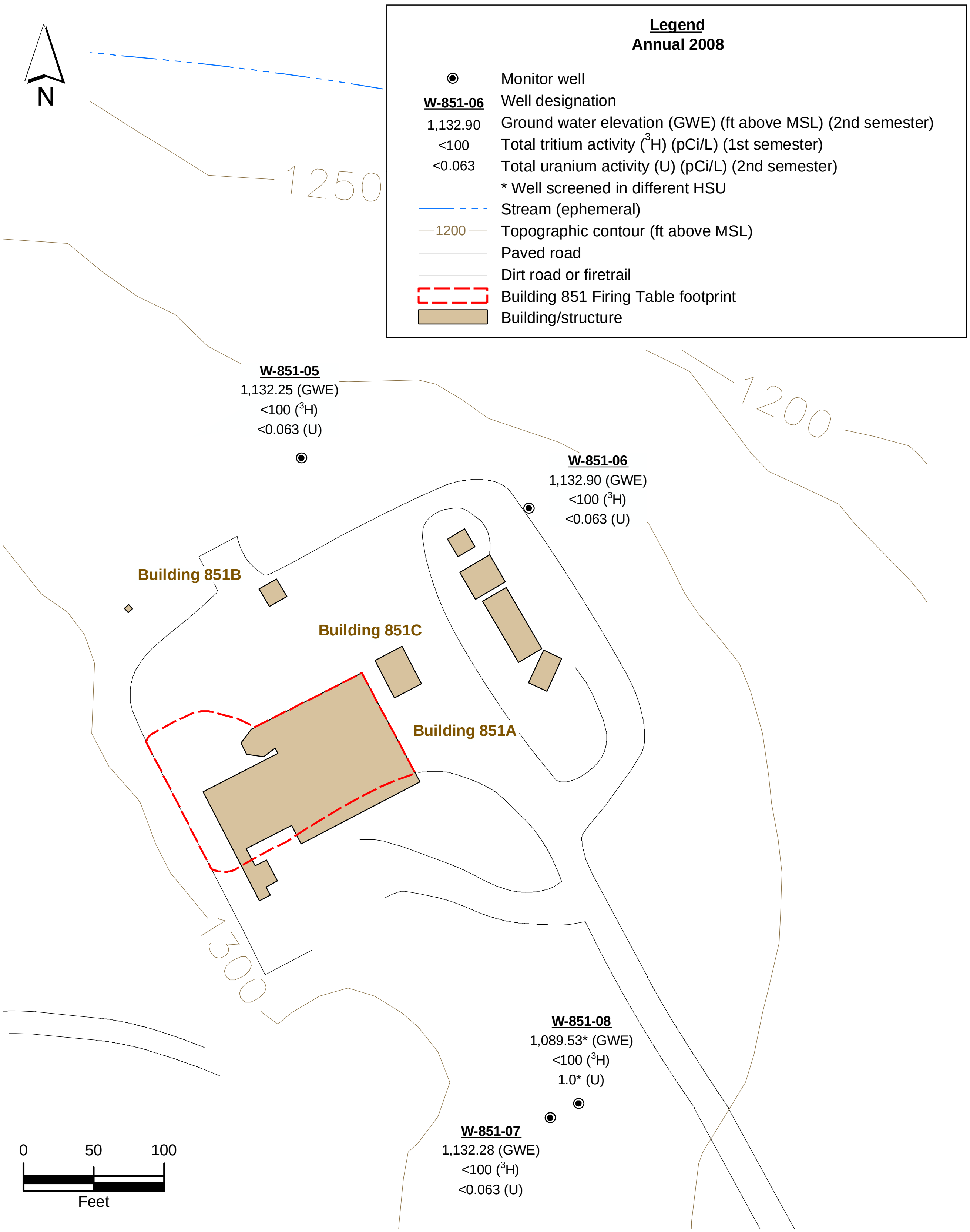


Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, and tritium and uranium activities in the Tmss HSU.

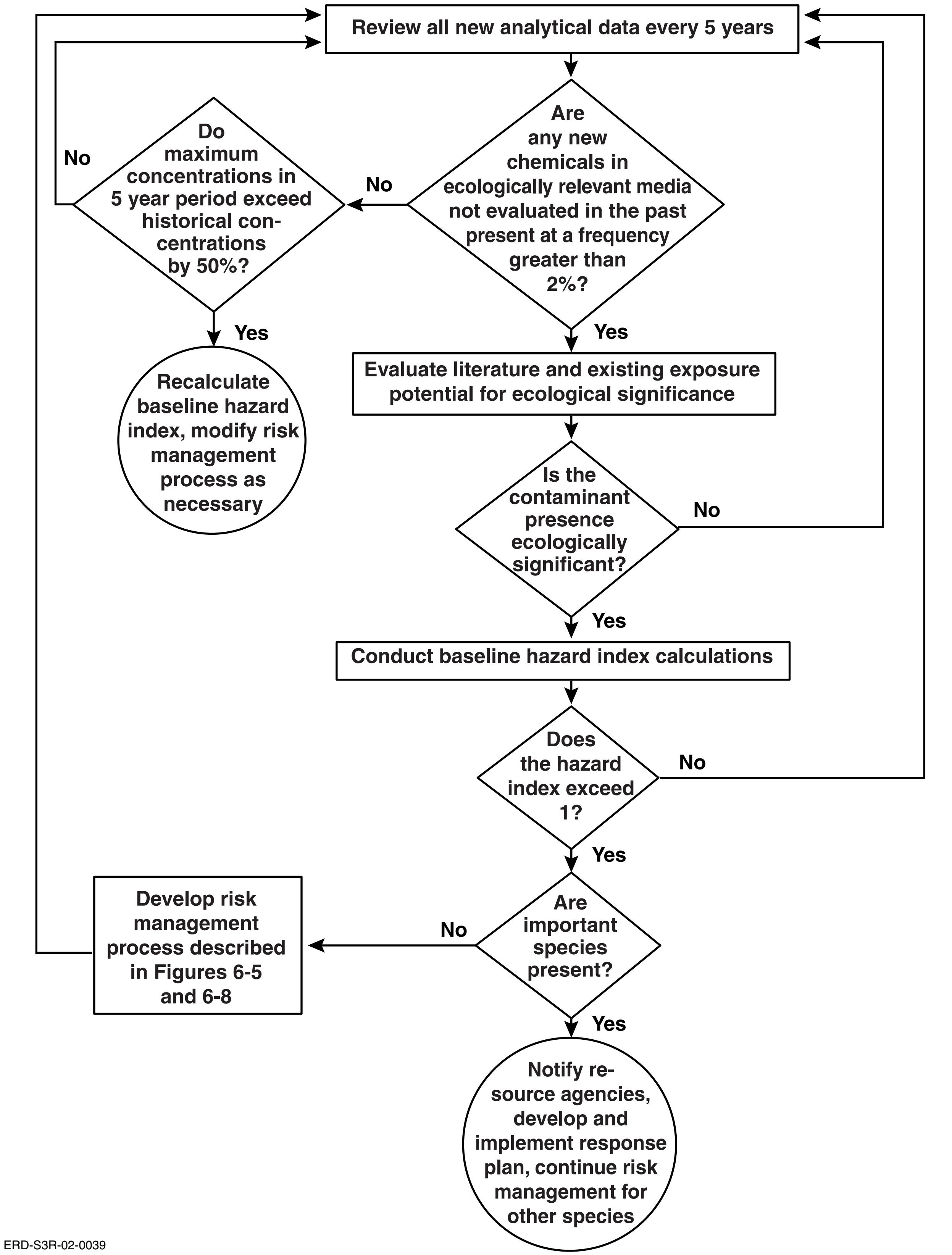
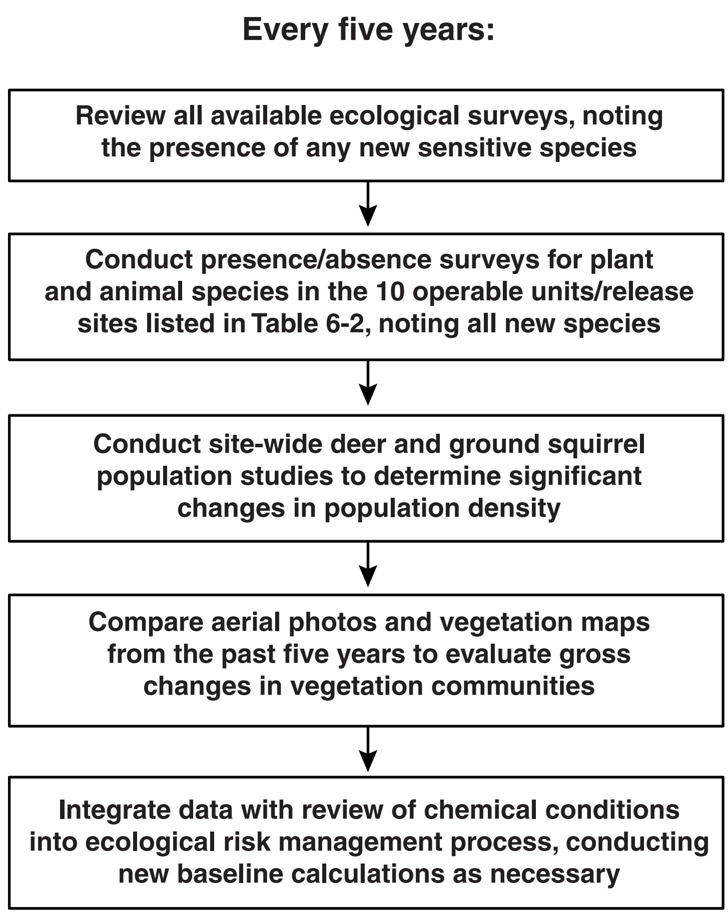


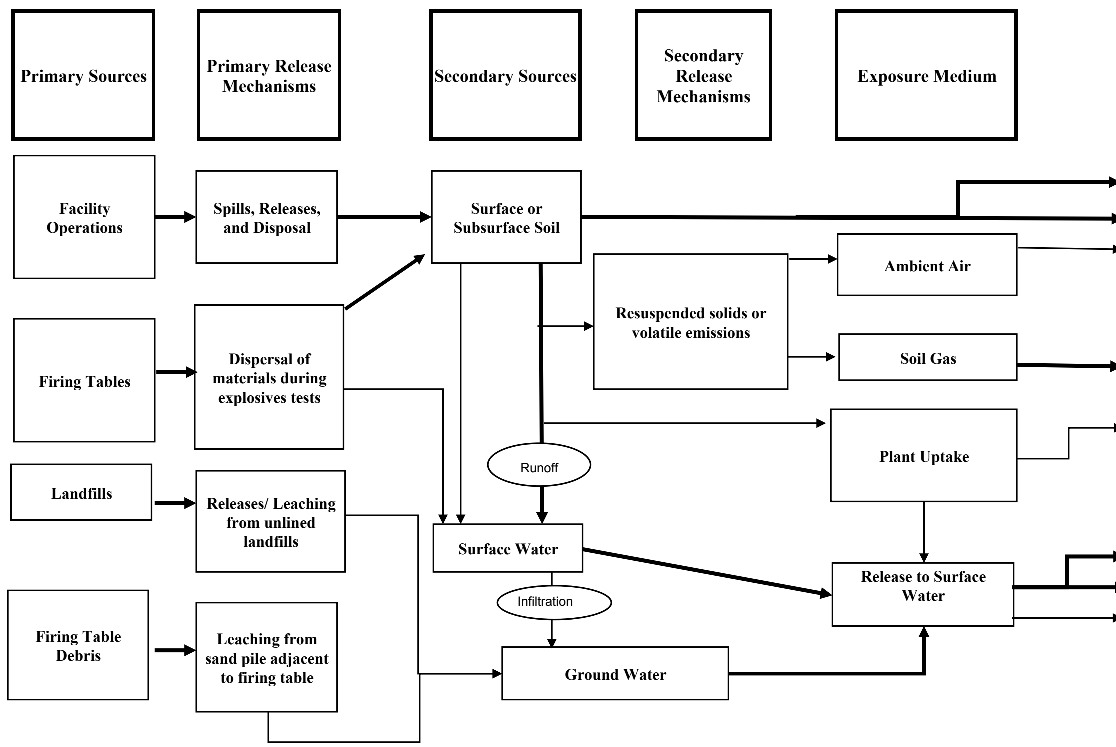
Figure 4.2-1. Ecological risk management process to evaluate changes in contaminant conditions.



ERD-S3R-02-0040

Figure 4.2-2. Steps required to evaluate changes in ecological conditions.

Figure 4.2-3. Generalized Conceptual Site Model for LLNL Site 300
Lawrence Livermore National Laboratory, Site 300, Livermore, California



	Ecological Receptors							
	Terrestrial					Aquatic		
Exposure Route	Mammalian 1° consumers[a]	Mammalian 2° consumers[b]	Mammalian 3° consumers[c]	Avian 1° consumers[d]	Avian 2° consumers[e]	Benthic Invertebrates[f]	Aquatic Invertebrates[f]	Amphibians & Reptiles
Ingestion	●	●	●	●				
Dermal Contact	○	○	○	○				○
Inhalation	○	○	○					
Ingestion								
Dermal Contact								
Inhalation	○	○	○					
Ingestion	●	○		●				
Dermal Contact								
Inhalation								
Ingestion	○	○	○	○	○	●	●	○
Dermal Contact						●	●	●
Inhalation	○	○	○	○	○			

Notes

- → Minor exposure pathway
- ➞ Major exposure pathway
- ● Potentially complete and significant exposure pathway
- ○ Potentially complete, but insignificant exposure pathway

Notes:

Different operable units within Site 300 will have contaminants specific to particular media. Therefore, each pathway may not apply for each OU.
Sediment is not included in the scope of this investigation.

a Mammalian 1º consumers - Ground squirrel
b Mammalian 2º consumers - Raccoon
c Mammalian 3º consumers - Kit Fox
d Avian 1º consumers - American Robin, Tri-colored Blackbird
e Avian 2º consumers - Burrowing Owl
f Exposure may occur via absorption through skin and filter feeding

Tables

Acronyms and Abbreviations

4-ADNT	4-Amino-2,6-dinitrotoluene
815	Building 815
817	Building 817
829	Building 829
832	Building 832
834	Building 834
850	Building 850
854	Building 854
A	Annual
As N	As nitrogen
As $CaCO_3$	As calcium carbonate
AUF	Area use factor
B	Biennial
BAFs	Bioaccumulation factors
BTEX	Benzene, toluene, ethyl benzene, and xylene
°C	Degrees Celsius
C12-C24	Diesel range organic compounds in the carbon 12 to carbon 24 range
CDFG	California Department of Fish and Game
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFE	Carbon filter effluent
CFI	Carbon filter influent
CF2I	Second aqueous phase granular carbon filter influent
CF3I	Third aqueous phase granular carbon filter influent
cfm	Cubic feet per minute
CFV2	Second vapor phase granular activated carbon filter effluent
CGSA	Central General Services Area
CHC	Corral hollow creek
Ci	Concentration in each dietary item
CMP/CP	Compliance Monitoring Plan/Contingency Plan
CMR	Compliance Monitoring Report
CNPS	California Native Plant Society
COC	Contaminants of Concern
COPEC	Chemicals of Potential Ecological Concern
CSM	Conceptual Site Model
DCA	Dichloroethane
DCE	Dichloroethylene or dichloroethene
DIS	Discretionary sampling (not required by the CMP)
DISS	Distal south
DMW	Detection monitor well

DNB	Dinitrobenzene
DNT	Dinitrotoluene
DOE	Department of Energy
DSB	Distal Site Boundary
DTSC	Department of Toxic Substances Control
DUP	Duplicate or collocated QC sample
E	Effluent
EGSA	Eastern General Services Area
EIR/EIS	Environmental Impact Report/Draft Environmental Impact Statement
EPC	Exposure point concentrations
EPA	Environmental Protection Agency
ERD	Environmental Restoration Department
ES&H	Environmental Safety and Health
EV	Effluent vapor
EW	Extraction well
FIR	Food ingestion rate
ft	Feet
ft^3	Cubic feet
g	Gram(s)
GAC	Granular activated carbon
gal	gallon(s)
gpd	Gallons per day
gpm	Gallons per minute
GSA	General Services Area
GTU	Ground Water Treatment Unit.
GW	Guard well
GWTS	Ground Water Treatment System
HE	High Explosives
HEPA	High Explosives Process Area
H-H	Hetch-Hetchy
HMX	High-Melting Explosive
HQ	hazard quotient
HSU	Hydrostratigraphic unit
I	Influent
ITS	Issues Tracking System
IV	Influent vapor
IW	Injection well
kg	kilograms
km	Kilometers
Kow	High log octanol-water partition coefficient
lb	Pounds
LHC	Light hydrocarbon
LLNL	Lawrence Livermore National Laboratory

LOAEL	Lowest observed adverse effect levels
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per meters cubed
µmhos/cm	Micro ohms per centimeter
M	Monthly
MCL	Maximum Contaminant Level
mg/L	Milligrams per liter
MNA	Monitored Natural Attenuation
MTU	Miniature Treatment Unit
mv	Millivolts
MWB	Monitor well used for background
N	No
NB	Nitrobenzene
NO_3	Nitrate
NA	Not applicable
NOAEL	No observed adverse effect levels
NT	Nitrotoluene
NTU	Nephelometric turbidity units
ORP	Oxidation/reduction potential
OU	Operable unit
O&M	Operations and Maintenance
PCBs	Polychlorinated biphenyls
PCE	Tetrachloroethylene
pCi/L	PicoCuries per liter
pH	A measure of the acidity or alkalinity of an aqueous solution
ppb_v	Parts per billion by volume
ppm_v	Parts per million on a volume-to-volume basis
PRX	Proximal
PRXN	Proximal north
PSDMP	Post-Monitoring Shutdown Plan
PTMW	Plume Tracking Monitor Well
Q	Quarterly
QAPP	Quality Assurance Project Plan
QA/QC	Quality assurance/quality control
QIF	Quality Improvement Form
RAOs	Remedial Action Objectives
R1	Receiving water sampling point located 100 ft upstream
R2	Receiving water sampling point located 100 ft downstream
RDX	Research Department explosive
REA	Reanalysis
REX	Resample
ROD	Record of Decision

RREI	Representative receptors of ecological interest
RWQCB	Regional Water Quality Control Board
S	Semi-annual
Scfm	Standard cubic feet per minute
SIR	Soil ingestion rates
SLs	Screening Levels
SOP	Standard Operating Procedure
SRC	Source
SPR	Spring
STU	Solar-powered Treatment Unit
SVE	Soil Vapor Extraction
SVTS	Soil Vapor Treatment System
SVI	Soil Vapor Influent
SWEIS	Site-Wide Environmental Impact Statement
SWFS	Site Wide Feasibility Study
SWRI	Site-Wide Remedial Investigation
TBOS	Tetrabutyl orthosilicate
TCA	Trichloroethane
TKEBS	Tetrakis (2-ethylbutyl) silane
TCE	Trichloroethylene
TDI	Total daily intake
TDS	Total dissolved solids
TF	Treatment facility
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TQ	Toxicity quotient
TRV	Toxicity Reference Value
$^{235}U/^{238}U$	Atom ratio of the isotopes uranium-235 and uranium-238
UCL	Upper confidence limit
U.S.	United States
USFWS	U.S. Fish and Wildlife Service
VCF4I	Fourth vapor phase granular activated carbon filter influent
VE	Vapor effluent
VES	Vapor extraction system
VI	Vapor influent
VOC	Volatile organic compound
WGMG	Water Guidance and Monitoring Group
WS	Water supply well
Y	Yes

Hydrogeologic Units

Lower $Tnbs_1$ =	Lower member of the Neroly lower blue sandstone, below claystone marker bed (regional aquifer).
Qal =	Quaternary alluvium.
Qls =	Quaternary landslide.
Qt =	Quaternary terrace.
Tmss =	Miocene Cierbo Formation—lower siltstone/claystone member.
$Tnsc_{1a}$, $Tnsc_{1b}$, $Tnsc_{1c}$ =	Sandstone bodies within the $Tnsc_1$ Neroly middle siltstone/claystone (1a = deepest).
$Tnbs_1$ =	Lower member of the Neroly lower blue sandstone.
$Tnbs_0$ =	Neroly silty sandstone.
$Tnbs_2$ =	Miocene Neroly upper blue sandstone.
$Tnsc_0$ =	Tertiary Neroly Formation—lower siltstone/claystone member.
$Tnsc_2$ =	Miocene Neroly Formation—upper siltstone/claystone member.
Tps =	Pliocene non-marine unit.
Tpsg =	Miocene non-marine unit (gravel facies).
Tts =	Tesla Formation.
Upper $Tnbs_1$ =	Upper member of the Neroly lower blue sandstone, above claystone marker bed.

Data Qualifier Flag Definitions

B = Analyte found in method blank, sample results should be evaluated.

D = Analysis performed at a secondary dilution or concentration (i.e., vapor samples).

E = The analyte was detected below the LLNL reporting limit, but above the analytical laboratory minimum detection limit.

F = Analyte found in field blank, trip blank, or equipment blank.

G = Quantitated using fuel calibration, but does not match typical fuel fingerprint.

H = Sample analyzed outside of holding time, sample results should be evaluated.

I = Surrogate recoveries were outside of QC limits.

J = Analyte was positively identified; the associated numerical value is the proximate concentration of the analyte in the sample.

L = Spike accuracy not within control limits.

O = Duplicate spike or sample precision not within control limits.

R = Sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

S = Analytical results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

T = Analyte is tentatively identified compound; result is approximate.

Requested Analyses

AS:THISO =	Thorium isotopes performed by alpha spectrometry.
AS:UISO =	Uranium isotopes performed by alpha spectrometry.
CMPTRIMET =	Thorium, uranium, and lithium performed by EPA Method 200.7.
DWMETALS =	Drinking water metals suite performed by various analytical methods.
E200.7:Ba =	Barium performed by EPA Method 200.7.
E200.7:Cd =	Cadmium performed by EPA Method 200.7.
E200.7:Cu =	Copper performed by EPA Method 200.7.
E200.7:SI =	Silica performed by EPA Method 200.7.
E200.7:Zn =	Zinc performed by EPA Method 200.7.
E210.2 =	Beryllium performed by EPA Method 210.2.
E218.2 =	Chromium performed by EPA Method 218.2.
E239.2 =	Lead performed by EPA Method 239.2.
E245.2 =	Mercury performed by EPA Method 245.2.
E300.0:NO3 =	Nitrate performed by EPA Method 300.0.
E300.0:PERC =	Perchlorate performed by EPA Method 300.0.
E340.2 =	Fluoride performed by EPA method 340.2.
E502.2 =	Volatile organic compounds performed by EPA Method 502.2.
E601 =	Halogenated volatile organic compounds performed by EPA Method 601.
E624 =	Volatile organic compounds performed by EPA Method 624.
E8082A =	Polychlorinated biphenyls performed by EPA Method 8082A.
E8260 =	Volatile organic compounds performed by EPA Method 8260.
E8330 =	High explosive compounds performed by EPA Method 8330.
E8330:R+H =	High explosive compounds RDX and HMX performed by EPA Method 8330.
E8330:TNT =	Trinitrotoluene performed by EPA Method 8330.
E900 =	Gross alpha and beta performed by EPA Method 900.
E906 =	Tritium performed by EPA Method 906.
EM8015:DIESEL =	Diesel range organic compounds performed by modified EPA Method 8015.
GENMIN =	General minerals suite performed by various analytical methods.
ICMSRAD =	Uranium isotopes performed by mass spectrometry (LLNL laboratory).
MS =	Uranium isotopes performed by mass spectrometry (commercial laboratory).
KPA =	Kinetic phosphorescence analysis.
MS:THISO =	Thorium isotopes performed by mass spectrometry.
MS:UISO =	Uranium isotopes performed by mass spectrometry.
T26METALS =	Title 26 metals.
TBOS =	Tetrabutylorthosilicate.

Ground Water Elevation Table Notes

ABD =	Abandoned.
AD =	Drilling of adjacent new wells disturbed water level.
BLOC =	Well Blocked.
BS =	Water detected below bottom of screened interval.
CB =	Installation completed as a Christy box.
DRY =	No water detected in well casing at time of measurement.
FA =	Flowing artesian well, water elevation converted.
FL =	Flowing.
ME =	Measuring error suspected.
MSL =	Mean Sea Level.
MT =	Measured twice.
NA =	Information not available.
NM =	Not Measured.
NOM =	Not on field map.
PD =	Predevelopment measurement.
PE =	Pump Extraction.
PF =	Pump not running at time of measurement.
PS =	Measurement taken just before sampling.
PT =	Pump test interfered with measurement.
RA =	Restricted access.
UC =	Unsafe conditions.
VE =	Vacuum Extraction.
WE =	Well equilibrium suspect.
WR =	Well recovery.

List of Tables

Table Summ-1. Mass removed, January 1, 2008 through December 31, 2008.

Treatment facility	Volume of ground water treated (thousands of gal)	Volume of soil vapor treated (thousands of ft^3)	Estimated total VOC mass removed (g)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (g)	Estimated total TBOS/ TKEBS mass removed (g)
CGSA GWTS	1,532	NA	340	NA	NA	NA	NA
CGSA SVTS	NA	14,785	2,600	NA	NA	NA	NA
834 GWTS	125	NA	1,500	NA	28	NA	6.8
834 SVTS	NA	43,481	10,000	NA	NA	NA	NA
815-SRC GWTS	735	NA	16	25	270	190	NA
815-PRX GWTS	767	NA	76	20	240	NA	NA
815-DSB GWTS	1,403	NA	51	NA	NA	NA	NA
817-SRC GWTS	6	NA	0	0.67	2.0	1.1	NA
817-PRX GWTS	591	NA	26	55	210	19	NA
829-SRC GWTS	1	NA	0.077	0.046	0.39	NA	NA
854-SRC GWTS	746	NA	140	5.4	140	NA	NA
854-SRC SVTS	NA	8,537	670	NA	NA	NA	NA
854-PRX GWTS	433	NA	56	20	78	NA	NA
854-DIS GWTS	9	NA	1.1	0.13	0.45	NA	NA
832-SRC GWTS	75	NA	21	1.5	27	NA	NA
832-SRC SVTS	NA	1,897	69	NA	NA	NA	NA
830-SRC GWTS	2,397	NA	820	4.3	120	NA	NA
830-SRC SVTS	NA	12,249	1,900	NA	NA	NA	NA
830-DISS GWTS	894	NA	150	0	170	NA	NA
Total	9,714	80,948	18,000	130	1,300	210	6.8

Notes:

815 = Building 815.
817 = Building 817.
829 = Building 829.
830 = Building 830.
832 = Building 832.
834 = Building 834.
854 = Building 854.
CGSA = Central General Services Area.
DIS = Distal.
DISS = Distal south.
DSB = Distal site boundary.
ft^3 = Cubic feet.
g = Grams.
gal = Gallons.
GWTS = Ground water treatment system.
kg = Kilograms.
NA = Not applicable.
PRX = Proximal.
RDX = Research Department Explosive.
SRC = Source.
SVTS = Soil vapor treatment system.
TBOS = Tetra 2-ethylbutylorthosilicate.
TKEBS = Tetrakis (2-ethylbutyl) silane.
VOC = Volatile organic compound.
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table Summ-2. Summary of cumulative remediation.

Treatment facility	Volume of ground water treated (thousands of gallons)	Volume of soil vapor treated (thousands of ft³)	Estimated total VOC mass removed (kg)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (kg)	Estimated total TBOS/ TKEBS mass removed (kg)
EGSA GWTS	309,379	NA	7.6	NA	NA	NA	NA
CGSA GWTS	17,779	NA	25	NA	NA	NA	NA
CGSA SVTS	NA	109,437	71	NA	NA	NA	NA
834 GWTS	730	NA	40	NA	160	NA	9.5
834 SVTS	NA	208,692	310	NA	NA	NA	NA
815-SRC GWTS	3,898	NA	0.097	220	1,300	1.1	NA
815-PRX GWTS	5,369	NA	0.60	130	1,600	NA	NA
815-DSB GWTS	10,181	NA	0.34	NA	NA	NA	NA
817-SRC GWTS	29	NA	0	2.9	9.1	0.0048	NA
817-PRX GWTS	1,710	NA	0.068	160	570	0.045	NA
829-SRC GWTS	4	NA	0.00030	0.15	1.3	NA	NA
854-SRC GWTS	6,460	NA	4.9	130	1,300	NA	NA
854-SRC SVTS	NA	37,536	8.6	NA	NA	NA	NA
854-PRX GWTS	2,279	NA	0.55	100	390	NA	NA
854-DIS GWTS	21	NA	0.0026	0.27	1.3	NA	NA
832-SRC GWTS	574	NA	0.18	16	230	NA	NA
832-SRC SVTS	NA	19,674	1.9	NA	NA	NA	NA
830-SRC GWTS	3,204	NA	2.3	7.8	210	NA	NA
830-SRC SVTS	NA	25,262	49	NA	NA	NA	NA
830-PRXN GWTS	1,949	NA	0.26	NA	22	NA	NA
830-DISS GWTS	3,588	NA	1.2	27	810	NA	NA
Total	367,154	400,601	520	790	6,600	1.1	9.5

Notes:

815 = Building 815.
817 = Building 817.
829 = Building 829.
830 = Building 830.
832 = Building 832.
834 = Building 834.
854 = Building 854.
CGSA = Central General Services Area.
DIS = Distal.
DISS = Distal south.
DSB = Distal site boundary.
EGSA = Eastern General Services Area.
ft³ = Cubic feet.
g = Grams.
GWTS = Ground water treatment system.
kg = Kilograms.
NA = Not applicable.
PRX = Proximal.
PRXN = Proximal North.
RDX = Research Department Explosive.
SRC = Source.
SVTS = Soil vapor treatment system.
TBOS = Tetra 2-ethylbutylorthosilicate.
TKEBS = Tetrakis (2-ethylbutyl) silane.
VOC = Volatile organic compound.
***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2-1. Wells and boreholes installed during 2008.

Well name	Well type	OU	Well/Borehole installation date	HSU	Drill Depth (ft)	Casing depth (ft)	Screened interval (ft-bgs)	Primary COCs	Primary COC sampling frequency	Secondary COCs	Secondary COC sampling frequency
W-PIT7-2419	Piezometer	OU5 (Non-CMP)	6/12/08	Qal/WBR	10.8	10.8	5.3-10.3	NA	NA	NA	NA
W-PIT7-2420	Piezometer	OU5 (Non-CMP)	6/12/08	Qal/WBR	10.2	10.2	4.7-9.7	NA	NA	NA	NA

Notes:

Piezometers W-PIT7-2419 and -2420 were embedded in Pit 7 SRC infiltration trench pea gravel backfill to eventually monitor the presence of effluent; no drilling was involved.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
CGSA	July	552	744	1,173	132,488
	August	384	648	799	69,310
	September	648	648	1,366	110,407
	October	840	840	1,835	115,695
	November	456	480	1,132	58,064
	December	336	792	972	135,246
Total		3,216	4,152	7,277	621,210

Table 2.1-2. Central General Services Area OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (μg/L)	PCE (μg/L)	cis-1,2-DCE (μg/L)	trans-1,2-DCE (μg/L)	Carbon tetra-chloride (μg/L)	Chloro-form (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	1,1,2-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Vinyl chloride (μg/L)
CGSA-GWTS-E	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	8/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	9/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	10/21/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	11/5/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	12/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-I	7/9/08	32	1.3	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-I	10/21/08	34	0.73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.1-2 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency	Total 1,2-DCE (μg/L)
CGSA-GWTS-E	7/9/08	0 of 18	–
CGSA-GWTS-E	8/12/08	0 of 18	–
CGSA-GWTS-E	9/9/08	0 of 18	–
CGSA-GWTS-E	10/21/08	0 of 18	–
CGSA-GWTS-E	11/5/08	0 of 18	–
CGSA-GWTS-E	12/2/08	0 of 18	–
CGSA-GWTS-I	7/9/08	0 of 18	–
CGSA-GWTS-I	10/21/08	0 of 18	–

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.1-3. Central General Services Area OU nitrate in ground water treatment system influent and effluent.

Location	Date	Nitrate as NO3 (mg/L)
CGSA-GWTS-E	7/9/08	29
CGSA-GWTS-E	8/12/08	25
CGSA-GWTS-E	9/9/08	40
CGSA-GWTS-E	10/21/08	40 D
CGSA-GWTS-E	11/5/08	43 D
CGSA-GWTS-E	12/2/08	44 D
CGSA-GWTS-I	7/9/08	32 D
CGSA-GWTS-I	10/21/08	42 D

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.1-4. Central General Services Area OU treatment facility sampling and analysis plan.

Sample Location	Sample Identification	Parameter	Frequency
CGSA GWTS			
Influent Port	CGSA-I	VOCs	Quarterly
		pH	Quarterly
		Nitrate	Quarterly
Effluent Port	CGSA-E	VOCs	Monthly
		pH	Monthly
		Nitrate	Monthly
Vapor Samples	CGSA-CFI	VOCs	Weekly[a]
	CGSA -CFE	VOCs	Weekly[a]
	CGSA -CF2I	VOCs	Weekly[a]
CGSA SVE System			
Influent Vapor	CGSA-VI	No Monitoring Requirements	
Effluent Vapor	CGSA-VE	VOCs	Weekly[a]
Intermediate GAC	CGSA-VCF4I	VOCs	Weekly[a]

Notes:

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

See Acronyms and Abbreviations in the Tables section of this report for acronymn and abbreviation definitions.

[a] Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

Table 2.1-5. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35A-01	PTMW	Qal	B	CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2009.
W-35A-01	PTMW	Qal	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-35A-01	PTMW	Qal	S	CMP	E601	2	Y	
W-35A-01	PTMW	Qal	S	CMP	E601	4	Y	
W-35A-02	PTMW	Qal	B	CMP	E200.7:Zn	2	NA	Next sample required 2ndQ 2009.
W-35A-02	PTMW	Qal	S	CMP	E601	2	Y	
W-35A-02	PTMW	Qal	S	CMP	E601	4	Y	
W-35A-03	PTMW	Qal	S	CMP	E601	2	Y	
W-35A-03	PTMW	Qal	S	CMP	E601	4	Y	
W-35A-04*	PTMW	Qal	B	CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2009.
W-35A-04*	PTMW	Qal		WGMG	E502.2	4	Y	
W-35A-04*	PTMW	Qal	S	CMP	E601	2	Y	
W-35A-04*	PTMW	Qal	S	CMP	E601	4	Y	
W-35A-05	PTMW	$Tnbs_2$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-35A-05	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-35A-05	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-35A-06	PTMW	Qal	S	CMP	E601	2	Y	
W-35A-06	PTMW	Qal	S	CMP	E601	4	Y	
W-35A-07	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-35A-07	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-35A-08	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35A-08	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35A-08	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35A-08	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-35A-09	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-35A-09	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-35A-10	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-35A-10	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-35A-11	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-35A-11	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-35A-12	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-35A-12	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-35A-13	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-35A-13	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-35A-14	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35A-14	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35A-14	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35A-14	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-71	EW	$Tnbs_2$	B	CMP-TF	E245.2	4	N	CGSA extraction well. Insufficient water to collect sample.
W-7A	PTMW	$Tnbs_1$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-7A	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7A	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7B	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7B	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7C	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7C	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7E*	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	

Table 2.1-5. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-7E*	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7ES*	PTMW	Qal	S	CMP	E601	2	Y	
W-7ES*	PTMW	Qal	S	CMP	E601	4	Y	
W-7F	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-7F	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-7G	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7G	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7H	PTMW	Qal	S	CMP	E601	2	Y	
W-7H	PTMW	Qal	S	CMP	E601	4	Y	
W-7I	EW	$Tnbs_2$		DIS	E601	1	Y	CGSA extraction well.
W-7I	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7I	EW	$Tnbs_2$	S	CMP-TF	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-7J	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-7J	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-7K	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7K	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7L	PTMW	$Tnbs_1$	B	CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2009.
W-7L	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7L	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7M	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7M	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7N	PTMW	$Tnbs_1$	B	CMP	E245.2	2	NA	Next sample required 2ndQ 2009.
W-7N	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-7N	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-7O	EW	Qal	B	CMP-TF	E200.7:Cu	2	NA	CGSA extraction well. Next sample required 2ndQ 2009.
W-7O	EW	Qal	B	CMP-TF	E200.7:Zn	2	NA	CGSA extraction well. Next sample required 2ndQ 2009.
W-7O	EW	Qal		DIS	E601	1	Y	CGSA extraction well.
W-7O	EW	Qal	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7O	EW	Qal	S	CMP-TF	E601	4	Y	CGSA extraction well.
W-7P	EW	$Tnbs_1$		DIS	E601	1	Y	CGSA extraction well.
W-7P	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7P	EW	$Tnbs_1$	S	CMP-TF	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-7PS*	PTMW	Qal	Q	CMP	E601	1	Y	
W-7PS*	PTMW	Qal	Q	CMP	E601	2	N	Dry.
W-7PS*	PTMW	Qal	Q	CMP	E601	3	Y	
W-7PS*	PTMW	Qal	Q	CMP	E601	4	Y	
W-7Q	PTMW	$Tnbs_2$		DIS	E601	1	Y	
W-7Q	PTMW	$Tnbs_2$		DIS	E601	2	Y	
W-7Q	PTMW	$Tnbs_2$		DIS	E601	3	Y	
W-7Q	PTMW	$Tnbs_2$		DIS	E601	4	Y	
W-7R	EW	Qal		DIS	E601	1	Y	CGSA extraction well.
W-7R	EW	Qal	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7R	EW	Qal	S	CMP-TF	E601	4	Y	CGSA extraction well.
W-7S	PTMW	Qal		DIS	E601	1	Y	
W-7S	PTMW	Qal		DIS	E601	2	Y	
W-7S	PTMW	Qal		DIS	E601	3	Y	
W-7S	PTMW	Qal		DIS	E601	4	Y	

Table 2.1-5. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-7T	PTMW	Qal		DIS	E601	1	Y	
W-7T	PTMW	Qal		DIS	E601	2	Y	
W-7T	PTMW	Qal		DIS	E601	3	Y	
W-7T	PTMW	Qal		DIS	E601	4	Y	
W-843-01	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-843-01	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-843-02	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-843-02	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-872-01	PTMW	$Tnbs_2$	B	CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2009.
W-872-01	PTMW	$Tnbs_2$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-872-01	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-872-01	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-872-02	EW	$Tnbs_2$	S	CMP-TF	E601	2	N	CGSA extraction well. Insufficient water to collect sample.
W-872-02	EW	$Tnbs_2$	S	CMP-TF	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-873-01	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-873-01	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-873-02	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-873-02	PTMW	$Tnbs_2$	S	CMP	E601	4	N	Pump was not working.
W-873-03	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-873-03	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-873-04	PTMW	$Tnsc_1$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-873-04	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-873-04	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-873-06	PTMW	$Tnbs_2$	B	CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2009.
W-873-06	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-873-06	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-873-07	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-873-07	EW	$Tnbs_2$	S	CMP-TF	E601	4	Y	CGSA extraction well.
W-875-01	PTMW	$Tnbs_2$	B	CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2009.
W-875-01	PTMW	$Tnbs_2$	B	CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2009.
W-875-01	PTMW	$Tnbs_2$	B	CMP	E200.7:Zn	2	NA	Next sample required 2ndQ 2009.
W-875-01	PTMW	$Tnbs_2$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-875-01	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-875-01	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-875-02	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-875-02	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-875-03	PTMW	$Tnbs_2$	S	CMP	E601	2	N	Dry.
W-875-03	PTMW	$Tnbs_2$	S	CMP	E601	4	N	Cristy box was flooded.
W-875-04	PTMW	$Tnbs_2$	B	CMP	E239.2	2	NA	Next sample required 2ndQ 2009.
W-875-04	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-875-04	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-875-05	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	

Table 2.1-5. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-875-05	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-875-06	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-875-06	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-875-07	EW	$Tnbs_2$	B	CMP-TF	E239.2	2	NA	CGSA extraction well. Next sample required 2ndQ 2009.
W-875-07	EW	$Tnbs_2$		DIS	E601	1	Y	CGSA extraction well.
W-875-07	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-875-07	EW	$Tnbs_2$	S	CMP-TF	E601	4	Y	CGSA extraction well.
W-875-08	EW	$Tnbs_2$		DIS	E601	1	Y	CGSA extraction well.
W-875-08	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-875-08	EW	$Tnbs_2$	S	CMP-TF	E601	4	Y	CGSA extraction well.
W-875-09	PTMW	$Tnbs_2$	S	CMP	E601	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-09	PTMW	$Tnbs_2$	S	CMP	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-875-10	PTMW	$Tnbs_2$	B	CMP	E200.7:Ba	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-10	PTMW	$Tnbs_2$	B	CMP	E239.2	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-10	PTMW	$Tnbs_2$	S	CMP	E601	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-10	PTMW	$Tnbs_2$	S	CMP	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-875-11	PTMW	$Tnbs_2$	S	CMP	E601	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-11	PTMW	$Tnbs_2$	S	CMP	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-875-15	PTMW	$Tnbs_2$	S	CMP	E601	2	N	CGSA extraction well. Insufficient water to collect sample.
W-875-15	PTMW	$Tnbs_2$	S	CMP	E601	4	N	CGSA extraction well. Insufficient water to collect sample.
W-876-01	PTMW	$Tnbs_2$	S	CMP	E601	2	Y	
W-876-01	PTMW	$Tnbs_2$	S	CMP	E601	4	Y	
W-879-01	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-879-01	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-889-01	PTMW	$Tnsc_1$	S	CMP	E601	2	Y	
W-889-01	PTMW	$Tnsc_1$	S	CMP	E601	4	Y	
W-CGSA-1732	PTMW	Qal		DIS	E601	2	N	Insufficient water to collect sample.
W-CGSA-1733	PTMW	Qal		DIS	E601	1	Y	
W-CGSA-1733	PTMW	Qal		DIS	E601	2	Y	
W-CGSA-1733	PTMW	Qal		DIS	E601	3	Y	
W-CGSA-1733	PTMW	Qal		DIS	E601	4	Y	
W-CGSA-1735	PTMW	Qal		DIS	E601	2	Y	
W-CGSA-1736	PTMW	Qal		DIS	E601	2	Y	
W-CGSA-1736	PTMW	Qal		DIS	E601	4	Y	

Table 2.1-5. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-CGSA-1737	PTMW	Qal		DIS	E601	2	Y	
W-CGSA-1737	PTMW	Qal		DIS	E601	4	Y	
W-CGSA-1739	PTMW	Qal		DIS	E601	1	Y	
W-CGSA-1739	PTMW	Qal		DIS	E601	2	Y	
W-CGSA-1739	PTMW	Qal		DIS	E601	3	Y	
W-CGSA-1739	PTMW	Qal		DIS	E601	4	Y	

Notes:
***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents and the results are reported in the LLNL Site Annual Environmental Report.**

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.1-6. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample Driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CDF-1*	WS	Qal-$Tnsc_0$		WGMG	E502.2	1	Y	
CDF-1*	WS	Qal-$Tnsc_0$		WGMG	E502.2	2	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
CDF-1*	WS	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
CON-1*	WS	$Tnsc_0$		WGMG	E502.2	1	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	1	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	1	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	1	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	2	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	2	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	2	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	3	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	3	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	3	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	4	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	4	Y	
CON-1*	WS	$Tnsc_0$	M	CMP	E601	4	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	1	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	2	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	3	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
CON-2	PTMW	Qal-$Tnsc_0$	M	CMP	E601	4	Y	
W-24P-03	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25D-01	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25D-02	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25M-01	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25M-02	PTMW	Qal	A	PSDMP	E601	2	N	Pump was not working.
W-25M-03	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25N-01	PTMW	Qal		DIS	E601	1	Y	
W-25N-01	PTMW	Qal	S	PSDMP	E601	2	Y	
W-25N-01	PTMW	Qal	S	PSDMP	E601	4	Y	
W-25N-04	PTMW	Tmss	A	PSDMP	E601	2	Y	
W-25N-05	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-25N-05	PTMW	$Tnbs_1$	S	PSDMP	E601	2	Y	
W-25N-05	PTMW	$Tnbs_1$	S	PSDMP	E601	4	N	Pump was not working.
W-25N-06	PTMW	Qal	A	PSDMP	E601	2	Y	

Table 2.1-6. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample Driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-25N-07	GW	Qal	Q	PSDMP	E601	1	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601	2	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601	3	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601	4	Y	
W-25N-08	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-09	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	3	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	4	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	3	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	4	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	3	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	4	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	3	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	4	Y	
W-25N-15	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25N-18	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-20*	PTMW	Qal	A	PSDMP	E601	2	Y	
W-25N-21	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-22	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-23	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-25N-23	PTMW	$Tnbs_1$	S	PSDMP	E601	2	Y	
W-25N-23	PTMW	$Tnbs_1$	S	PSDMP	E601	4	Y	
W-25N-24	PTMW	Qal		DIS	E601	1	Y	
W-25N-24	PTMW	Qal	S	PSDMP	E601	2	Y	
W-25N-24	PTMW	Qal	S	PSDMP	E601	4	Y	
W-25N-25	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-26	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-28	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-01	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-26R-01*	PTMW	$Tnbs_1$	S	PSDMP	E601	2	Y	
W-26R-01*	PTMW	$Tnbs_1$	S	PSDMP	E601	4	Y	
W-26R-02	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-03	PTMW	Qal		DIS	E601	1	Y	
W-26R-03	PTMW	Qal	S	PSDMP	E601	2	Y	
W-26R-03	PTMW	Qal	S	PSDMP	E601	4	Y	
W-26R-04	PTMW	Qal		DIS	E601	1	Y	
W-26R-04	PTMW	Qal	S	PSDMP	E601	2	Y	
W-26R-04	PTMW	Qal	S	PSDMP	E601	4	Y	
W-26R-05*	PTMW	Qal		DIS	E601	1	Y	
W-26R-05*	PTMW	Qal	S	PSDMP	E601	2	Y	
W-26R-05*	PTMW	Qal	S	PSDMP	E601	4	Y	
W-26R-06	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-26R-06	PTMW	$Tnbs_1$	S	PSDMP	E601	2	Y	
W-26R-06	PTMW	$Tnbs_1$	S	PSDMP	E601	4	Y	
W-26R-07	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	

Table 2.1-6. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample Driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-26R-08	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-11*	PTMW	Qal	S	CMP	E601	2	Y	
W-26R-11*	PTMW	Qal	S	CMP	E601	4	N	Sample inadvertently left off sampling plan.
W-7D	PTMW	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-7DS*	PTMW	Qal	A	PSDMP	E601	2	Y	

Notes:
EGSA primary COCs: VOCs (E601, E502.2, or E624).
***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents and the results are reported in the LLNL Site Annual Environmental Report.**

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.1-7. Central General Services Area (CGSA) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
CGSA	July	190	27	NA	NA	NA	NA
	August	130	20	NA	NA	NA	NA
	September	230	30	NA	NA	NA	NA
	October	250	28	NA	NA	NA	NA
	November	120	11	NA	NA	NA	NA
	December	100	39	NA	NA	NA	NA
Total		1,000	160	NA	NA	NA	NA

Table 2.2-1. Building 834 (834) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
834	July	829	840	4,951	13,781
	August	671	672	4,014	9,856
	September	658	663	4,001	10,165
	October	837	840	5,145	11,513
	November	633	648	4,113	7,970
	December	339	336	2,239	4,000
Total		3,967	3,999	24,463	57,285

Table 2.2-2. Building 834 OU VOCs in ground water extraction treatment system influent and effluent.

Location	Date	TCE (μg/L)	PCE (μg/L)	cis-1,2-DCE (μg/L)	trans-1,2-DCE (μg/L)	Carbon tetra-chloride (μg/L)	Chloro-form (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	1,1,2-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Vinyl chloride (μg/L)
834-GWTS-E	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	10/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	11/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	12/1/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-I	7/9/08	2,800 D	21 D	370 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
834-GWTS-I	10/8/08	2,600 D	23 D	400 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.2-2 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency	1,2-DCE (total) (μg/L)
834-GWTS-E	7/9/08	0 of 18	–
834-GWTS-E	8/4/08	0 of 18	–
834-GWTS-E	9/2/08	0 of 18	–
834-GWTS-E	10/8/08	0 of 18	–
834-GWTS-E	11/3/08	0 of 18	–
834-GWTS-E	12/1/08	0 of 18	–
834-GWTS-I	7/9/08	1 of 18	370 D
834-GWTS-I	10/8/08	1 of 18	400 D

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.2-3. Building 834 OU nitrate in ground water extraction treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)
834-GWTS-E	7/9/08	84
834-GWTS-E	8/4/08	78
834-GWTS-E	9/2/08	74
834-GWTS-E	10/8/08	74
834-GWTS-E	11/3/08	75
834-GWTS-E	12/1/08	70
834-GWTS-I	7/9/08	77
834-GWTS-I	10/8/08	83

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.2-4. Building 834 OU diesel range organic compounds in ground water extraction treatment system influent and effluent.

Location	Date	Diesel Range Organics (C12-C24) (μg/L)
834-GWTS-E	7/9/08	<200
834-GWTS-E	8/4/08	<200
834-GWTS-E	9/2/08	<200
834-GWTS-E	10/8/08	<200
834-GWTS-E	11/3/08	<200
834-GWTS-E	12/1/08	<200
834-GWTS-I	7/9/08	<200
834-GWTS-I	8/4/08	<200
834-GWTS-I	9/2/08	<200
834-GWTS-I	10/8/08	<200
834-GWTS-I	11/3/08	<200
834-GWTS-I	12/1/08	200

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.2-5. Building 834 OU tetrabutyl orthosilicate (TBOS) in ground water extraction treatment system influent and effluent.

Location	Date	TBOS (μg/L)
834-GWTS-E	7/9/08	<10
834-GWTS-E	8/4/08	<10
834-GWTS-E	9/2/08	<10
834-GWTS-E	10/8/08	<10
834-GWTS-E[a]	11/3/08	R
834-GWTS-E	12/1/08	<10
834-GWTS-I	7/9/08	15
834-GWTS-I	8/4/08	<10 O
834-GWTS-I	9/2/08	11
834-GWTS-I	10/8/08	<10
834-GWTS-I	11/3/08	<10
834-GWTS-I	12/1/08	<10

Notes:

[a] **Analytical results rejected due to failure of laboratory to meet QA/QC requirements.**

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.2-6. Building 834 OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
834 GWTS			
Influent Port	834-I	VOCs	Quarterly
		TBOS	Quarterly
		Diesel	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	834-E	VOCs	Monthly
		TBOS	Monthly
		Diesel	Monthly
		Nitrate	Monthly
		pH	Monthly
834 SVTS			
Influent Port	834-VI	No Monitoring Requirements	
Effluent Port	834-VE	VOCs	Weekly[a]
Intermediate GAC	834-VCF4I	VOCs	Weekly[a]

Notes:

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-1709	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1709	PTMW	Tpsg		DIS	E300.0:PERC	3	Y	
W-834-1709	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-1709	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-1709	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-1711	PTMW	Tps		DIS	DWMETALS	3	Y	
W-834-1711	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-1711	PTMW	Tps	S	CMP	E601	1	Y	
W-834-1711	PTMW	Tps	S	CMP	E601	3	Y	
W-834-1711	PTMW	Tps	A	CMP	TBOS	1	Y	
W-834-1824	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1824	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-1824	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-1824	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-1825	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1825	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-1825	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-1825	PTMW	Tpsg		DIS	E601	4	Y	
W-834-1825	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-1833	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1833	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-1833	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-1833	PTMW	Tpsg		DIS	E601	4	Y	
W-834-1833	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-2001	EW	Tpsg		Baseline	DWMETALS	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	E200.7:Si	3	Y	834 extraction well.
W-834-2001	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	E300.0:PERC	3	Y	834 extraction well.
W-834-2001	EW	Tpsg	S	CMP-TF	E624	1	Y	834 extraction well.
W-834-2001	EW	Tpsg		DIS	E624	2	Y	834 extraction well.
W-834-2001	EW	Tpsg	S	CMP-TF	E624	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		DIS	E624	4	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	E8330	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	E900	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	E906	3	Y	834 extraction well.
W-834-2001	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	EM8015:DIESEL	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	GENMIN	3	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	MS:UISO	3	Y	834 extraction well.
W-834-2001	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-2001	EW	Tpsg		Baseline	TBOS	3	Y	834 extraction well.
W-834-2113	PTMW	Tpsg		Baseline	E200.7:Si	4	Y	
W-834-2113	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2113	PTMW	Tpsg		DIS	E300.0:NO3	4	Y	
W-834-2113	PTMW	Tpsg	S	CMP	E624	1	Y	
W-834-2113	PTMW	Tpsg		DIS	E624	2	Y	
W-834-2113	PTMW	Tpsg	S	CMP	E624	3	Y	
W-834-2113	PTMW	Tpsg		Baseline	E8330	4	Y	
W-834-2113	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-2113	PTMW	Tpsg		DIS	TBOS	3	Y	
W-834-2117	PTMW	Tpsg		Baseline	E200.7:Si	4	Y	
W-834-2117	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2117	PTMW	Tpsg	S	CMP	E624	1	Y	
W-834-2117	PTMW	Tpsg		DIS	E624	2	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-2117	PTMW	Tpsg	S	CMP	E624	3	Y	
W-834-2117	PTMW	Tpsg		Baseline	E8330	4	Y	
W-834-2117	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-2118	PTMW	Tpsg		Baseline	E200.7:Si	4	Y	
W-834-2118	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2118	PTMW	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-2118	PTMW	Tpsg		DIS	E300.0:PERC	3	Y	
W-834-2118	PTMW	Tpsg	S	CMP	E624	1	Y	
W-834-2118	PTMW	Tpsg		DIS	E624	2	Y	
W-834-2118	PTMW	Tpsg	S	CMP	E624	3	Y	
W-834-2118	PTMW	Tpsg		Baseline	E8330	4	Y	
W-834-2118	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-2119	PTMW	Tpsg		Baseline	E200.7:Si	4	Y	
W-834-2119	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2119	PTMW	Tpsg	S	CMP	E624	1	Y	
W-834-2119	PTMW	Tpsg	S	CMP	E624	3	Y	
W-834-2119	PTMW	Tpsg		Baseline	E8330	4	Y	
W-834-2119	PTMW	Tpsg		Baseline	MS:UISO	4	Y	
W-834-2119	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-A1	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-A1	PTMW	Tps	S	CMP	E624	1	Y	
W-834-A1	PTMW	Tps	S	CMP	E624	3	Y	
W-834-A1	PTMW	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-A1	PTMW	Tps	A	CMP	TBOS	1	Y	
W-834-A2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-A2	PTMW	Tpsg		DIS	E300.0:PERC	3	N	Dry.
W-834-A2	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-A2	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-A2	PTMW	Tpsg	A	CMP	EM8015:DIESEL	1	Y	
W-834-A2	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-B2	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-B2	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-B2	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-B2	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-B3	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-B4	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-B4	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-B4	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-B4	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-C2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C2	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-C2	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-C2	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-C4	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C4	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-C4	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-C4	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-C5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-C5	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-C5	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-C5	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D10	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D10	PTMW	Tps	S	CMP	E624	1	N	Dry.
W-834-D10	PTMW	Tps	S	CMP	E624	3	N	Insufficient water to collect sample.
W-834-D10	PTMW	Tps	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D10	PTMW	Tps	A	CMP	TBOS	1	N	Dry.
W-834-D11	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D11	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-D11	PTMW	Tpsg	S	CMP	E601	3	N	Insufficient water to collect sample.
W-834-D11	PTMW	Tpsg	A	CMP	EM8015:DIESEL	1	N	Insufficient water to collect sample.
W-834-D11	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D12	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-D12	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-D12	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-D12	EW	Tpsg	S	CMP-TF	E624	1	Y	834 extraction well.
W-834-D12	EW	Tpsg	S	CMP-TF	E624	3	Y	834 extraction well.
W-834-D12	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	834 extraction well.
W-834-D12	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-D12	EW	Tpsg		DIS	TBOS	3	Y	834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-D13	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-D13	EW	Tpsg		DIS	TBOS	3	Y	834 extraction well.
W-834-D14	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D14	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-D14	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-D14	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D15	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D15	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-D15	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-D15	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D16	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D16	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-D16	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-D16	PTMW	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D16	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D17	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D17	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-D17	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-D17	PTMW	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D17	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D18	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D18	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-D18	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-D18	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D2	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D2	PTMW	$Tnbs_1$	A	CMP	E601	1	N	Dry.

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-D2	PTMW	$Tnbs_1$	A	CMP	TBOS	1	N	Dry.
W-834-D3	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D3	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-D3	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-D3	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-D4	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-D4	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-D4	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-D4	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-D4	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-D4	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-D4	EW	Tpsg		DIS	TBOS	3	Y	834 extraction well.
W-834-D5	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.*
W-834-D5	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.*
W-834-D5	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.*
W-834-D5	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.*
W-834-D5	EW	Tpsg		DIS	TBOS	3	Y	834 extraction well.*
W-834-D6	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-D6	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-D6	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-D6	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-D6	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-D6	EW	Tpsg		DIS	EM8015:DIESEL	1	Y	834 extraction well.
W-834-D6	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-D6	EW	Tpsg		DIS	TBOS	3	Y	834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-D7	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-D7	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-D7	EW	Tpsg	S	CMP-TF	E624	1	Y	834 extraction well.
W-834-D7	EW	Tpsg	S	CMP-TF	E624	3	Y	834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-D9A	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D9A	PTMW	$Tnbs_2$	A	CMP	E601	1	N	Dry.
W-834-D9A	PTMW	$Tnbs_2$	A	CMP	TBOS	1	N	Dry.
W-834-G3	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-G3	PTMW	Tpsg	A	CMP	E601	1	N	Dry.
W-834-G3	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-H2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-H2	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-H2	PTMW	Tpsg	S	CMP	E601	3	N	Insufficient water to collect sample.
W-834-H2	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-J1	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-J1	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-J1	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-J1	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-J1	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-J1	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-J2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-J2	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-J2	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-J2	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-J3	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-J3	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-J3	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-J3	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-K1A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-K1A	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-K1A	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-K1A	PTMW	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-K1A	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-M1	PTMW	Tpsg		DIS	E218.2	1	Y	
W-834-M1	PTMW	Tpsg		DIS	E218.2	3	Y	
W-834-M1	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-M1	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-M1	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-M1	PTMW	Tpsg		DIS	GENMIN	1	Y	
W-834-M1	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-M2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-M2	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-M2	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-M2	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S1	EW	Tpsg		DIS	E218.2	1	Y	834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-S1	EW	Tpsg	S	CMP-TF	E624	1	Y	834 extraction well.
W-834-S1	EW	Tpsg		DIS	E624	2	Y	834 extraction well.
W-834-S1	EW	Tpsg	S	CMP-TF	E624	3	Y	834 extraction well.
W-834-S1	EW	Tpsg		DIS	E624	4	Y	834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-S1	EW	Tpsg	S	DIS	TBOS	3	Y	834 extraction well.
W-834-S10	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S10	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-S10	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-S10	PTMW	Tpsg	S	CMP	EM8015:DIESEL	1	N	Dry.
W-834-S10	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S12A	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	1	Y	834 extraction well.
W-834-S12A	EW	Tpsg		DIS	E624	2	Y	834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	3	Y	834 extraction well.
W-834-S12A	EW	Tpsg		DIS	E624	4	Y	834 extraction well.
W-834-S12A	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-S13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	834 extraction well.
W-834-S13	EW	Tpsg	S	CMP-TF	E601	1	Y	834 extraction well.
W-834-S13	EW	Tpsg		DIS	E601	2	Y	834 extraction well.
W-834-S13	EW	Tpsg	S	CMP-TF	E601	3	Y	834 extraction well.
W-834-S13	EW	Tpsg		DIS	E601	4	Y	834 extraction well.
W-834-S13	EW	Tpsg	A	CMP-TF	TBOS	1	Y	834 extraction well.
W-834-S4	PTMW	Tpsg		DIS	E218.2	1	Y	
W-834-S4	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S4	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-S4	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-S4	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-S5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S5	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-S5	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-S5	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-S6	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S6	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-S6	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-S6	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-S7	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S7	PTMW	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-S7	PTMW	Tpsg		DIS	E300.0:PERC	3	Y	
W-834-S7	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-S7	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-S7	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-S8	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-834-S8	PTMW	$Tnsc_2$	S	CMP	E624	1	Y	
W-834-S8	PTMW	$Tnsc_2$	S	CMP	E624	3	Y	
W-834-S8	PTMW	$Tnsc_2$	A	CMP	EM8015:DIESEL	1	Y	
W-834-S8	PTMW	$Tnsc_2$	A	CMP	TBOS	1	Y	
W-834-S9	PTMW	$Tnsc_2$		DIS	E218.2	1	Y	
W-834-S9	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-834-S9	PTMW	$Tnsc_2$	S	CMP	E624	1	Y	
W-834-S9	PTMW	$Tnsc_2$	S	CMP	E624	3	Y	
W-834-S9	PTMW	$Tnsc_2$	A	CMP	EM8015:DIESEL	1	Y	
W-834-S9	PTMW	$Tnsc_2$	A	CMP	TBOS	1	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	3	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	4	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	TBOS	1	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	TBOS	3	Y	
W-834-T11	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T11	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T11	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-T11	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-T2	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-T2	PTMW	Tpsg		DIS	E601	4	Y	
W-834-T2	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-T2A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2A	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-T2A	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-T2A	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-T2B	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2B	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T2B	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-T2B	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2C	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2C	PTMW	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T2C	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-T2C	PTMW	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2D	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2D	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-T2D	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-T2D	PTMW	Tpsg	A	CMP	TBOS	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-T3	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	3	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	4	Y	
W-834-T3	GW	$Tnbs_1$	S	CMP	TBOS	1	Y	
W-834-T3	GW	$Tnbs_1$	S	CMP	TBOS	3	Y	
W-834-T5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T5	PTMW	Tpsg	S	CMP	E601	1	Y	
W-834-T5	PTMW	Tpsg	S	CMP	E601	3	Y	
W-834-T5	PTMW	Tpsg	A	CMP	TBOS	1	Y	
W-834-T7A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water to collect sample.
W-834-T7A	PTMW	Tpsg	S	CMP	E601	1	N	Insufficient water to collect sample.
W-834-T7A	PTMW	Tpsg	S	CMP	E601	3	N	Insufficient water to collect sample.
W-834-T7A	PTMW	Tpsg	A	CMP	TBOS	1	N	Insufficient water to collect sample.
W-834-T8A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water to collect sample.
W-834-T8A	PTMW	Tpsg	S	CMP	E601	1	N	Insufficient water to collect sample.
W-834-T8A	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-T8A	PTMW	Tpsg	A	CMP	TBOS	1	N	Insufficient water to collect sample.
W-834-T9	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water to collect sample.
W-834-T9	PTMW	Tpsg	S	CMP	E601	1	N	Insufficient water to collect sample.
W-834-T9	PTMW	Tpsg	S	CMP	E601	3	N	Dry.
W-834-T9	PTMW	Tpsg	A	CMP	TBOS	1	N	Insufficient water to collect sample.
W-834-U1	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-U1	PTMW	Tps	S	CMP	E624	1	Y	
W-834-U1	PTMW	Tps	S	CMP	E624	3	Y	
W-834-U1	PTMW	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-U1	PTMW	Tps	A	CMP	TBOS	1	Y	

Notes:
Building 834 primary COC: VOCs (E601, 502.2, or E624).
Building 834 secondary COC: Nitrate (E300.0:NO3).
Building 834 secondary COC: TBOS/TKEBS.
Building 834 secondary COC: Diesel.
***Well W-834-D5 is hooked up to the Building 834 treatment system but is not currently being used as an extraction well.**
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.2-8. Building 834 (834) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
834	July	1,000	230	NA	3.2	NA	1.1
	August	1,300	150	NA	2.4	NA	0.74
	September	1,300	160	NA	2.4	NA	0.81
	October	1,700	130	NA	2.8	NA	0.81
	November	1,400	88	NA	2.2	NA	0.51
	December	760	44	NA	1.1	NA	0.25
Total		7,400	810	NA	14	NA	4.2

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
BC6-10	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
BC6-10	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
BC6-10	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
BC6-10	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
BC6-10	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
BC6-10	PTMW	$Tnbs_1$	S	CMP	E906	3	Y	
BC6-13 (SPRING 7)	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	N	Dry.
BC6-13 (SPRING 7)	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	N	Dry.
BC6-13 (SPRING 7)	PTMW	$Qt/Tnbs_1$	A	CMP	E601	1	N	Dry.
BC6-13 (SPRING 7)	PTMW	$Qt/Tnbs_1$	A	CMP	E906	1	N	Dry.
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:NO3	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E300.0:PERC	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	2	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	3	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$	M	CMP	E601	4	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$		WGMG	E624	1	Y	
CARNRW1*	WS	$Tnbs_1/Tmss$		WGMG	E624	2	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW1*	WS	$Tnbs_1$/Tmss		WGMG	E624	3	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss		WGMG	E624	4	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW1*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss		WGMG	E502.2	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss		WGMG	E502.2	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss		WGMG	E502.2	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss		WGMG	E502.2	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW2*	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	3	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	4	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	1	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	1	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E8260	1	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E8260	3	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E8260	4	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E906	3	Y	
EP6-06	DMW	$Qt/Tnbs_1$		WGMG	E906	4	Y	
EP6-07	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
EP6-07	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
EP6-07	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
EP6-07	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
EP6-07	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
EP6-07	PTMW	$Tnbs_1$	S	CMP	E906	3	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	N	Insufficient water to collect sample.
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	N	Insufficient water to collect sample.
EP6-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E8260	3	N	Insufficient water to collect sample.
EP6-08	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E906	1	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E906	2	Y	
EP6-08	DMW	$Tnbs_1$		WGMG	E906	3	N	Insufficient water to collect sample.
EP6-08	DMW	$Tnbs_1$		WGMG	E906	4	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E8260	3	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E906	1	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E906	2	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E906	3	Y	
EP6-09	DMW	$Tnbs_1$		WGMG	E906	4	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E601	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E601	3	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E906	3	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E8260	1	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E8260	3	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E8260	4	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E906	3	Y	
K6-01S	DMW	$Qt/Tnbs_1$		WGMG	E906	4	Y	
K6-03	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-03	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-03	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
K6-03	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
K6-03	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-03	PTMW	$Tnbs_1$	S	CMP	E906	3	Y	
K6-04	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-04	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-04	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
K6-04	PTMW	$Tnbs_1$	S	CMP	E601	3	N	Insufficient water to collect sample.
K6-04	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-04	PTMW	$Tnbs_1$	S	CMP	E906	3	N	Insufficient water to collect sample.

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-14	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-14	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-14	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
K6-14	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
K6-14	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-14	PTMW	$Tnbs_1$	S	CMP	E906	3	Y	
K6-15	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	N	Dry.
K6-15	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	N	Dry.
K6-15	PTMW	$Qt/Tnbs_1$	S	CMP	E601	1	N	Dry.
K6-15	PTMW	$Qt/Tnbs_1$	S	CMP	E601	3	N	Dry.
K6-15	PTMW	$Qt/Tnbs_1$	S	CMP	E906	1	N	Dry.
K6-15	PTMW	$Qt/Tnbs_1$	S	CMP	E906	3	N	Dry.
K6-16	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-16	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-16	PTMW	$Qt/Tnbs_1$	S	CMP	E601	1	Y	
K6-16	PTMW	$Qt/Tnbs_1$	S	CMP	E601	3	Y	
K6-16	PTMW	$Qt/Tnbs_1$	S	CMP	E906	1	Y	
K6-16	PTMW	$Qt/Tnbs_1$	S	CMP	E906	3	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:PERC	3	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	3	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	4	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	3	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	4	Y	
K6-18	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-18	PTMW	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-18	PTMW	$Qt/Tnbs_1$	S	CMP	E601	1	Y	
K6-18	PTMW	$Qt/Tnbs_1$	S	CMP	E601	3	Y	
K6-18	PTMW	$Qt/Tnbs_1$	S	CMP	E906	1	Y	
K6-18	PTMW	$Qt/Tnbs_1$	S	CMP	E906	3	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E8260	1	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E8260	3	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E8260	4	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-19	DMW	$Qt/Tnbs_1$		WGMG	E906	3	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-19	DMW	Qt/Tnbs$_1$		WGMG	E906	4	Y	
K6-21	PTMW	Qt	A	CMP	E300.0:NO3	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E300.0:PERC	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E601	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E906	1	N	Dry.
K6-22	GW	Tnbs$_1$	S	CMP	E300.0:NO3	1	Y	
K6-22	GW	Tnbs$_1$	S	CMP	E300.0:NO3	3	Y	
K6-22	GW	Tnbs$_1$	S	CMP	E300.0:PERC	1	Y	
K6-22	GW	Tnbs$_1$	S	CMP	E300.0:PERC	3	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E601	1	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E601	2	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E601	3	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E601	4	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E906	1	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E906	2	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E906	3	Y	
K6-22	GW	Tnbs$_1$	Q	CMP	E906	4	Y	
K6-23	PTMW	Tmss	A	CMP	E300.0:NO3	1	Y	
K6-23	PTMW	Tmss	A	CMP	E300.0:PERC	1	Y	
K6-23	PTMW	Tmss	S	CMP	E601	1	Y	
K6-23	PTMW	Tmss	S	CMP	E601	3	Y	
K6-23	PTMW	Tmss	S	CMP	E906	1	Y	
K6-23	PTMW	Tmss	S	CMP	E906	3	Y	
K6-24	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-24	PTMW	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-24	PTMW	Tnbs$_1$	S	CMP	E601	1	Y	
K6-24	PTMW	Tnbs$_1$	S	CMP	E601	3	N	Dry.
K6-24	PTMW	Tnbs$_1$	S	CMP	E906	1	Y	
K6-24	PTMW	Tnbs$_1$	S	CMP	E906	3	N	Dry.
K6-25	PTMW	Tmss	A	CMP	E300.0:NO3	1	Y	
K6-25	PTMW	Tmss	A	CMP	E300.0:PERC	1	Y	
K6-25	PTMW	Tmss	S	CMP	E601	1	Y	
K6-25	PTMW	Tmss	S	CMP	E601	3	Y	
K6-25	PTMW	Tmss	S	CMP	E906	1	Y	
K6-25	PTMW	Tmss	S	CMP	E906	3	Y	
K6-26	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-26	PTMW	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-26	PTMW	Tnbs$_1$	S	CMP	E601	1	Y	
K6-26	PTMW	Tnbs$_1$	S	CMP	E601	3	Y	
K6-26	PTMW	Tnbs$_1$	S	CMP	E906	1	Y	
K6-26	PTMW	Tnbs$_1$	S	CMP	E906	3	Y	
K6-27	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-27	PTMW	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-27	PTMW	Tnbs$_1$	S	CMP	E601	1	Y	
K6-27	PTMW	Tnbs$_1$	S	CMP	E601	3	Y	
K6-27	PTMW	Tnbs$_1$	S	CMP	E906	1	Y	
K6-27	PTMW	Tnbs$_1$	S	CMP	E906	3	Y	
K6-32	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-32	PTMW	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-32	PTMW	Tnbs$_1$	S	CMP	E601	1	Y	
K6-32	PTMW	Tnbs$_1$	S	CMP	E601	3	N	Dry.

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-32	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-32	PTMW	$Tnbs_1$	S	CMP	E906	3	N	Dry.
K6-33	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-33	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-33	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
K6-33	PTMW	$Tnbs_1$	S	CMP	E601	3	N	Insufficient water to collect sample.
K6-33	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-33	PTMW	$Tnbs_1$	S	CMP	E906	3	N	Insufficient water to collect sample.
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	3	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	4	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	3	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	4	Y	
K6-35	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-35	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-35	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
K6-35	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
K6-35	PTMW	$Tnbs_1$	S	CMP	E906	1	Y	
K6-35	PTMW	$Tnbs_1$	S	CMP	E906	3	Y	
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E8260	1	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E8260	2	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E8260	3	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E8260	4	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E906	1	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E906	2	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E906	3	N	Dry.
K6-36	DMW	$Tnbs_1$		WGMG	E906	4	N	Dry.
SPRING15	SPR	Qt	A	CMP	E300.0:NO3	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E300.0:PERC	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E601	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E906	1	N	Dry.
SPRING8	SPR	Qt		DIS	DWMETALS	4	Y	
SPRING8	SPR	Qt		DIS	E210.2	4	Y	
SPRING8	SPR	Qt		DIS	E300.0:PERC	4	Y	
SPRING8	SPR	Qt		DIS	E601	4	Y	

Table 2.3-1. Pit 6 Landfill OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING8	SPR	Qt		DIS	E8330	4	Y	
SPRING8	SPR	Qt		DIS	E906	4	Y	
W-33C-01	PTMW	Tts	A	CMP	E300.0:NO3	1	Y	
W-33C-01	PTMW	Tts	A	CMP	E300.0:PERC	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E601	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E601	3	Y	
W-33C-01	PTMW	Tts	S	CMP	E906	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E906	3	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E300.0:NO3	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E300.0:PERC	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E601	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E906	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E601	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	3	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	4	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	3	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	4	Y	

Notes:
DWM Analytes and sampling frequency are specified in the Pit 6 Landfill Post-Closure Plan.
***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents and the results are reported in the LLNL Site Annual Environmental Report.**
****K6-01 to be sampled quarterly if K6-01S is dry.**
Pit 6 primary COC: VOCs (E601, E502.2, or E624).
Pit 6 primary COC: tritium (E906).
Pit 6 secondary COC: nitrate (E300:NO3).
Pit 6 secondary COC: perchlorate (E300.0:PERC).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.4-1. Building 815-Source (815-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-SRC	July	NA	827	NA	73,323
	August	NA	411	NA	48,363
	September	NA	660	NA	57,167
	October	NA	839	NA	71,239
	November	NA	617	NA	52,016
	December	NA	858	NA	71,439
Total		NA	4,212	NA	373,547

Table 2.4-2. Building 815-Proximal (815-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-PRX	July	NA	816	NA	84,741
	August	NA	679	NA	73,025
	September	NA	667	NA	68,690
	October	NA	850	NA	83,500
	November	NA	580	NA	54,032
	December	NA	387	NA	36,249
Total		NA	3,979	NA	400,237

Table 2.4-3. Building 815-Distal Site Boundary (815-DSB) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-DSB	July	NA	502	NA	90,881
	August	NA	631	NA	125,548
	September	NA	645	NA	140,452
	October	NA	818	NA	171,741
	November	NA	621	NA	123,378
	December	NA	644	NA	107,516
Total		NA	3,861	NA	759,516

Table 2.4-4. Building 817-Source (817-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
817-SRC	July	NA	41	NA	623
	August	NA	11	NA	542
	September	NA	17	NA	287
	October	NA	18	NA	564
	November	NA	10	NA	307
	December	NA	2	NA	43
Total		NA	99	NA	2,366

Table 2.4-5. Building 817-Proximal (817-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
817-PRX	July	NA	839	NA	68,938
	August	NA	376	NA	32,539
	September	NA	551	NA	48,716
	October	NA	833	NA	81,930
	November	NA	485	NA	46,097
	December	NA	0	NA	2
Total		NA	3,084	NA	278,222

Table 2.4-6. Building 829-Source (829-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
829-SRC	July	NA	20	NA	287
	August	NA	3	NA	36
	September	NA	0	NA	0
	October	NA	0	NA	0
	November	NA	0	NA	0
	December	NA	0	NA	0
Total		NA	23	NA	323

Table 2.4-7. High Explosives Process Area OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 815-Distal Site Boundry															
815-DSB-GWTS-E	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-E	8/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-E	9/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-E	11/5/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-E	12/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-I	7/9/08	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-GWTS-I	10/6/08	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 815-Proximal															
815-PRX-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-E	11/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-E	12/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-I	7/8/08	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-GWTS-I	10/6/08	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 815-Source															
815-SRC-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	11/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	12/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-I	7/8/08	4.9 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.65	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-I	10/6/08	6.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2.4-7. High Explosives Process Area OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 817-Proximal															
817-PRX-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	11/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	12/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-I	7/8/08	9.8 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-I	10/6/08	9.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 817-Source															
817-SRC-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	9/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	10/13/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	11/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	12/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-I	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-I	10/13/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 829-Source[a]															
829-SRC-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-GWTS-E	8/20/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-GWTS-I	7/8/08	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples were collected after August due to system down for compressor failure.

Table 2.4-7 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency
Building 815-Distal Site Boundry		
815-DSB-GWTS-E	7/9/08	0 of 18
815-DSB-GWTS-E	8/12/08	0 of 18
815-DSB-GWTS-E	9/9/08	0 of 18
815-DSB-GWTS-E	10/6/08	0 of 18
815-DSB-GWTS-E	11/5/08	0 of 18
815-DSB-GWTS-E	12/2/08	0 of 18
815-DSB-GWTS-I	7/9/08	0 of 18
815-DSB-GWTS-I	10/6/08	0 of 18
Building 815-Proximal		
815-PRX-GWTS-E	7/8/08	0 of 18
815-PRX-GWTS-E	8/4/08	0 of 18
815-PRX-GWTS-E	9/2/08	0 of 18
815-PRX-GWTS-E	10/6/08	0 of 18
815-PRX-GWTS-E	11/3/08	0 of 18
815-PRX-GWTS-E	12/8/08	0 of 18
815-PRX-GWTS-I	7/8/08	0 of 18
815-PRX-GWTS-I	10/6/08	0 of 18
Building 815-Source		
815-SRC-GWTS-E	7/8/08	0 of 18
815-SRC-GWTS-E	8/4/08	0 of 18
815-SRC-GWTS-E	9/2/08	0 of 18
815-SRC-GWTS-E	10/6/08	0 of 18
815-SRC-GWTS-E	11/4/08	0 of 18
815-SRC-GWTS-E	12/8/08	0 of 18
815-SRC-GWTS-I	7/8/08	0 of 18
815-SRC-GWTS-I	10/6/08	0 of 18
Building 817-Proximal		
817-PRX-GWTS-E	7/8/08	0 of 18
817-PRX-GWTS-E	8/4/08	0 of 18
817-PRX-GWTS-E	9/2/08	0 of 18
817-PRX-GWTS-E	10/6/08	0 of 18
817-PRX-GWTS-E	11/4/08	0 of 18
817-PRX-GWTS-E	12/8/08	0 of 18
817-PRX-GWTS-I	7/8/08	0 of 18
817-PRX-GWTS-I	10/6/08	0 of 18
Building 817-Source		
817-SRC-GWTS-E	7/8/08	0 of 18
817-SRC-GWTS-E	8/4/08	0 of 18
817-SRC-GWTS-E	9/3/08	0 of 18
817-SRC-GWTS-E	10/13/08	0 of 18
817-SRC-GWTS-E	11/4/08	0 of 18
817-SRC-GWTS-E	12/8/08	0 of 18
817-SRC-GWTS-I	7/8/08	0 of 18
817-SRC-GWTS-I	10/13/08	0 of 18
Building 829-Source[a]		
829-SRC-GWTS-E	7/8/08	0 of 18
829-SRC-GWTS-E	8/20/08	0 of 18
829-SRC-GWTS-I	7/8/08	0 of 18

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples were collected after August due to system down for compressor failure.

Table 2.4-8. High Explosives Process Area OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
Building 815-Distal Site Boundry			
815-DSB-GWTS-E	7/9/08	<0.5	NR
815-DSB-GWTS-E	8/12/08	<0.44	NR
815-DSB-GWTS-E	9/9/08	<0.5	NR
815-DSB-GWTS-E	10/6/08	<0.5 O	NR
815-DSB-GWTS-E	11/5/08	<0.5	NR
815-DSB-GWTS-E	12/2/08	<0.5	NR
815-DSB-GWTS-I	7/9/08	<1 D	NR
815-DSB-GWTS-I	10/6/08	<0.5	NR
Building 815-Proximal			
815-PRX-GWTS-E	7/8/08	88	<4
815-PRX-GWTS-E	8/4/08	66	<4
815-PRX-GWTS-E	9/2/08	88 D	<4 L
815-PRX-GWTS-E	10/6/08	110 DO	<4 O
815-PRX-GWTS-E	11/3/08	68	<4
815-PRX-GWTS-E	12/8/08	79	<4
815-PRX-GWTS-I	7/8/08	81 L	7.3
815-PRX-GWTS-I	10/6/08	82	6.2
Building 815-Source			
815-SRC-GWTS-E	7/8/08	110 D	<4
815-SRC-GWTS-E	8/4/08	99 D	<4
815-SRC-GWTS-E	9/2/08	110 D	<4 L
815-SRC-GWTS-E	10/6/08	110 D	<4 O
815-SRC-GWTS-E	11/4/08	99 D	<4
815-SRC-GWTS-E	12/8/08	99 D	<4
815-SRC-GWTS-I	7/8/08	98	6.2
815-SRC-GWTS-I	10/6/08	100	6
Building 817-Proximal			
817-PRX-GWTS-E	7/8/08	100 D	<4
817-PRX-GWTS-E	8/4/08	81 D	<4
817-PRX-GWTS-E	9/2/08	71	<4 L
817-PRX-GWTS-E	10/6/08	91 O	<4 O
817-PRX-GWTS-E	11/4/08	100 D	<4
817-PRX-GWTS-E	12/8/08	56 D	<4
817-PRX-GWTS-I	7/8/08	91	27 D
817-PRX-GWTS-I	10/6/08	99 D	21 D
Building 817-Source			
817-SRC-GWTS-E	7/8/08	93 D	<4
817-SRC-GWTS-E	8/4/08	64	<4
817-SRC-GWTS-E	9/3/08	71	<4
817-SRC-GWTS-E	10/13/08	60	<4
817-SRC-GWTS-E	11/4/08	64	<4
817-SRC-GWTS-E	12/8/08	52	<4
817-SRC-GWTS-I	7/8/08	91 L	<4
817-SRC-GWTS-I	10/13/08	81	28 D
Building 829-Source[a]			
829-SRC-GWTS-E	7/8/08	<0.5	<4
829-SRC-GWTS-E	8/20/08	<1 D	<4
829-SRC-GWTS-I	7/8/08	85 DL	9.6

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples were collected after August due to system down for compressor failure.

Table 2.4-9. High Explosives Process Area OU high explosive compounds in ground water treatment system influent and effluent.

Location	Date	1,3,5-TNB (µg/L)	1,3-DNB (µg/L)	TNT (µg/L)	2,4-DNT (µg/L)	2,6-DNT (µg/L)	2-Amino-4,6- DNT (µg/L)	2-NT (µg/L)	3-NT (µg/L)	4-Amino-2,6- DNT (µg/L)	4-NT (µg/L)	HMX (µg/L)	NB (µg/L)	RDX (µg/L)
Building 815-Proximal[a]														
815-PRX-GWTS-E	7/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-PRX-GWTS-E	8/4/08	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<0.89 O	<1.8 O	<0.89 O
815-PRX-GWTS-E	9/2/08	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.68	<1.4	<0.68
815-PRX-GWTS-E	10/6/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-PRX-GWTS-E	11/3/08	<1.4	<1.4	<1.4 O	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.68	<1.4	<0.68 O
815-PRX-GWTS-E	12/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-PRX-GWTS-I	7/8/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.85	<1.7	<0.85
815-PRX-GWTS-I	10/6/08	<1.4	<1.4	<1.4 O	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.72 O	<1.4	<0.72 O
Building 815-Source														
815-SRC-GWTS-E	7/8/08	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
815-SRC-GWTS-E	8/4/08	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<1.8 O	<0.89 O	<1.8 O	<0.89 O
815-SRC-GWTS-E	9/2/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.83	<1.7	<0.83
815-SRC-GWTS-E	10/6/08	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.82	<1.6	<0.82
815-SRC-GWTS-E	11/4/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77	<1.5	<0.77
815-SRC-GWTS-E	12/8/08	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.9	<1.8	<0.9
815-SRC-GWTS-I	7/8/08	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	7.5	<1.4	8.1	<1.4	66
815-SRC-GWTS-I	10/6/08	<1.6	<1.6	<1.6 O	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	7.4 O	<1.6	65 O
Building 817-Proximal														
817-PRX-GWTS-E	7/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-PRX-GWTS-E	8/4/08	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.8	<1.6	<0.8
817-PRX-GWTS-E	9/2/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.74	<1.5	<0.74
817-PRX-GWTS-E	10/6/08	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
817-PRX-GWTS-E	11/4/08	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.88	<1.8	<0.88
817-PRX-GWTS-E	12/8/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.85	<1.7	<0.85
817-PRX-GWTS-I	7/8/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.73	<1.5	9.1
817-PRX-GWTS-I	10/6/08	<1.4	<1.4	<1.4 O	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.71 O	<1.4	8.3 O

Table 2.4-9. High Explosives Process Area OU high explosive compounds in ground water treatment system influent and effluent.

Location	Date	1,3,5-TNB (μg/L)	1,3-DNB (μg/L)	TNT (μg/L)	2,4-DNT (μg/L)	2,6-DNT (μg/L)	2-Amino-4,6- DNT (μg/L)	2-NT (μg/L)	3-NT (μg/L)	4-Amino-2,6- DNT (μg/L)	4-NT (μg/L)	HMX (μg/L)	NB (μg/L)	RDX (μg/L)
Building 817-Source														
817-SRC-GWTS-E	7/8/08	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<1.2 D	<2.3 D	<1.2 D
817-SRC-GWTS-E	8/4/08	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<1.5 O	<0.77 O	<1.5 O	<0.77 O
817-SRC-GWTS-E	9/3/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-SRC-GWTS-E	10/13/08	<2	<2	<2 O	<2 O	<2	<2	<2	<2	<2	<2	<0.64	<2	<0.64
817-SRC-GWTS-E	11/4/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.84	<1.7	<0.84
817-SRC-GWTS-I	12/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-SRC-GWTS-I	7/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	110	<2	<0.65
817-SRC-GWTS-I	10/13/08	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	18	<1.3	48 O
Building 829-Source[a]														

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] High Explosive monitoring at 829-SRC-GWTS not required.

Table 2.4-10. High Explosives Process Area OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
815-SRC GWTS			
Influent Port	**815-SRC-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**815-SRC-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
815-PRX GWTS			
Influent Port	**815-PRX-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**815-PRX-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
815-DSB GWTS			
Influent Port	**815-DSB-I**	**VOCs**	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**815-DSB-E**	**VOCs**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Table 2.4-10 (Cont.). High Explosives Process Area OU treatment facility sampling and analysis plans.

Sample location	Sample identification	Parameter	Frequency
817-SRC GWTS			
Influent Port	**817-SRC-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**817-SRC-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
817-PRX GWTS			
Influent Port	**817-PRX-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**817-PRX-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
829-SRC GWTS			
Influent Port	**W-829-06-829-SRC-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**829-SRC-BTU-I**	**VOCs**	**Monthly**
Effluent Port	**829-SRC-E**	**Perchlorate**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Notes:

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:NO3	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E300.0:PERC	4	Y	
GALLO1*	WS	$Tnbs_2$		WGMG	E502.2	1	Y	
GALLO1*	WS	$Tnbs_2$		WGMG	E502.2	2	Y	
GALLO1*	WS	$Tnbs_2$		WGMG	E502.2	3	Y	
GALLO1*	WS	$Tnbs_2$		WGMG	E502.2	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E601	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	1	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	2	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	3	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	4	Y	
GALLO1*	WS	$Tnbs_2$	M	CMP	E8330	4	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING14	SPR	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
SPRING5	SPR	Tps	A	CMP	E300.0:NO3	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	A	CMP	E300.0:PERC	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	S	CMP	E601	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	S	CMP	E601	3	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	A	CMP	E8330	1	N	Dry. Sampled as W-817-03A.
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	3	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	3	Y	
W-35B-01	GW	Qal	Q	CMP	E601	1	Y	
W-35B-01	GW	Qal	Q	CMP	E601	2	Y	
W-35B-01	GW	Qal	Q	CMP	E601	3	Y	
W-35B-01	GW	Qal	Q	CMP	E601	4	Y	
W-35B-01	GW	Qal	S	CMP	E8330	1	Y	
W-35B-01	GW	Qal	S	CMP	E8330	3	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330	3	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-35C-01	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-01	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-01	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-01	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-35C-01	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-35C-02	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-35C-02	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-35C-02	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
W-35C-02	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
W-35C-02	PTMW	$Tnbs_1$	A	CMP	E8330	1	Y	
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-DSB extraction well.
W-35C-05	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-35C-05	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-35C-05	PTMW	Tps	S	CMP	E601	1	Y	
W-35C-05	PTMW	Tps	S	CMP	E601	3	Y	
W-35C-05	PTMW	Tps	A	CMP	E8330	1	Y	
W-35C-06	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-35C-06	PTMW	Qal	A	CMP	E300.0:PERC	1	Y	
W-35C-06	PTMW	Qal	S	CMP	E601	1	Y	
W-35C-06	PTMW	Qal	S	CMP	E601	3	Y	
W-35C-06	PTMW	Qal	A	CMP	E8330	1	Y	
W-35C-07	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-07	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-07	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-07	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-35C-07	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-35C-08	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-08	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-08	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-08	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-35C-08	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-4A	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-4A	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-4A	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-4A	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-4A	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-4AS	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-4AS	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-4AS	PTMW	Tps	S	CMP	E601	1	Y	
W-4AS	PTMW	Tps	S	CMP	E601	3	Y	
W-4AS	PTMW	Tps	A	CMP	E8330	1	Y	
W-4B	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-4B	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-4B	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-4B	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-4B	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	3	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	4	Y	
W-6BD	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BD	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-6BD	PTMW	Tps	S	CMP	E601	1	Y	
W-6BD	PTMW	Tps	S	CMP	E601	3	Y	
W-6BD	PTMW	Tps	A	CMP	E8330	1	Y	
W-6BS	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BS	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-6BS	PTMW	Tps	S	CMP	E601	1	Y	
W-6BS	PTMW	Tps	S	CMP	E601	3	Y	
W-6BS	PTMW	Tps	A	CMP	E8330	1	Y	
W-6CD	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6CD	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6CD	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-6CD	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-6CD	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-6CI	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-6CI	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-6CI	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-6CI	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-6CI	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-6CS	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6CS	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-6CS	PTMW	Tps	S	CMP	E601	1	Y	
W-6CS	PTMW	Tps	S	CMP	E601	3	Y	
W-6CS	PTMW	Tps	A	CMP	E8330	1	Y	
W-6EI	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-6EI	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-6EI	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-6EI	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-6EI	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-DSB extraction well.
W-6ES	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-6ES	PTMW	Qal	A	CMP	E300.0:PERC	1	Y	
W-6ES	PTMW	Qal	S	CMP	E601	1	Y	
W-6ES	PTMW	Qal	S	CMP	E601	3	Y	
W-6ES	PTMW	Qal	A	CMP	E8330	1	Y	
W-6F	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6F	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6F	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-6F	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-6F	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-6G	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6G	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6G	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-6G	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-6G	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-6I	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6I	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-6I	PTMW	Tps	S	CMP	E601	1	Y	
W-6I	PTMW	Tps	S	CMP	E601	3	Y	
W-6I	PTMW	Tps	A	CMP	E8330	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-6K	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6K	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6K	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-6K	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-6K	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-6L	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6L	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6L	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-6L	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-6L	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-806-06A	MWB	$Tnsc_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-808-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-808-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-808-01	PTMW	Tps	S	CMP	E601	1	Y	
W-808-01	PTMW	Tps	S	CMP	E601	3	Y	
W-808-01	PTMW	Tps	A	CMP	E8330	1	Y	
W-808-02	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	N	Dry.
W-808-02	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	N	Dry.
W-808-02	PTMW	$Tnsc_2$	S	CMP	E601	1	N	Dry.
W-808-02	PTMW	$Tnsc_2$	S	CMP	E601	3	N	Dry.
W-808-02	PTMW	$Tnsc_2$	A	CMP	E8330	1	N	Dry.
W-808-03	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-808-03	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-808-03	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
W-808-03	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
W-808-03	PTMW	$Tnbs_1$	A	CMP	E8330	1	Y	
W-809-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-01	PTMW	Tps	S	CMP	E601	1	Y	
W-809-01	PTMW	Tps	S	CMP	E601	3	Y	
W-809-01	PTMW	Tps	A	CMP	E8330	1	Y	
W-809-02	PTMW	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-809-02	PTMW	$Tnbs_2$		DIS	E300.0:PERC	1	Y	
W-809-02	PTMW	$Tnbs_2$		DIS	E300.0:PERC	3	Y	
W-809-02	PTMW	$Tnbs_2$		DIS	E601	1	Y	
W-809-02	PTMW	$Tnbs_2$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-809-03	PTMW	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-809-03	PTMW	$Tnbs_2$		DIS	E300.0:PERC	1	Y	
W-809-03	PTMW	$Tnbs_2$		DIS	E300.0:PERC	3	Y	
W-809-03	PTMW	$Tnbs_2$		DIS	E601	1	Y	
W-809-03	PTMW	$Tnbs_2$		DIS	E8330	1	Y	
W-809-04	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-04	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-04	PTMW	Tps	S	CMP	E601	1	Y	
W-809-04	PTMW	Tps	S	CMP	E601	3	N	Insufficient water to collect sample.
W-809-04	PTMW	Tps	A	CMP	E8330	1	Y	
W-810-01	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-810-01	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-810-01	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-810-01	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	
W-810-01	PTMW	$Tnbs_1$	A	CMP	E8330	1	Y	
W-814-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-814-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-814-01	PTMW	Tps	S	CMP	E601	1	Y	
W-814-01	PTMW	Tps	S	CMP	E601	3	Y	
W-814-01	PTMW	Tps	A	CMP	E8330	1	Y	
W-814-02	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-814-02	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-814-02	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-814-02	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-814-02	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-814-03	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-814-03	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-814-03	PTMW	Tps	S	CMP	E601	1	N	Dry.
W-814-03	PTMW	Tps	S	CMP	E601	3	N	Dry.
W-814-03	PTMW	Tps	A	CMP	E8330	1	N	Dry.
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	3	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	4	Y	
W-814-04	GW	$Tnsc_1$		DIS	E8330	1	Y	
W-814-2138	PTMW	Tpsg		Baseline	E200.7:Si	4	Y	
W-814-2138	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-814-2138	PTMW	Tpsg	A	CMP	E300.0:PERC	1	Y	
W-814-2138	PTMW	Tpsg	A	CMP	E601	1	Y	
W-814-2138	PTMW	Tpsg		Baseline	E624	4	Y	
W-814-2138	PTMW	Tpsg	A	CMP	E8330	1	Y	
W-814-2138	PTMW	Tpsg		Baseline	MS:UISO	4	Y	
W-814-2138	PTMW	Tpsg		Baseline	TBOS	4	Y	
W-815-01	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-01	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-01	PTMW	Tps	S	CMP	E601	1	N	Dry.
W-815-01	PTMW	Tps	S	CMP	E601	3	N	Dry.
W-815-01	PTMW	Tps	A	CMP	E8330	1	N	Dry.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-SRC extraction well.
W-815-03	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-03	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-03	PTMW	Tps	S	CMP	E601	1	N	Dry.
W-815-03	PTMW	Tps	S	CMP	E601	3	N	Dry.
W-815-03	PTMW	Tps	A	CMP	E8330	1	N	Dry.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-SRC extraction well.

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-815-04	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-SRC extraction well.
W-815-05	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-815-05	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-815-05	PTMW	Tps	S	CMP	E601	1	Y	
W-815-05	PTMW	Tps	S	CMP	E601	3	Y	
W-815-05	PTMW	Tps	A	CMP	E8330	1	Y	
W-815-06	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-06	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-06	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-06	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-815-06	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-815-07	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-07	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-07	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-07	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-815-07	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	3	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	4	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E8330	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E8330	3	Y	
W-815-1928	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-815-1928	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-815-1928	PTMW	Tps	S	CMP	E601	1	Y	
W-815-1928	PTMW	Tps	S	CMP	E601	3	Y	
W-815-1928	PTMW	Tps	A	CMP	E8330	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-815-2110	GW	$Tnbs_2$		Baseline	TBOS	4	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-815-2111	GW	$Tnbs_2$		Baseline	TBOS	4	Y	
W-815-2217	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-2217	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-2217	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-2217	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-815-2217	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-815-2217	PTMW	$Tnbs_2$		Baseline	TBOS	4	Y	
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:NO3	2	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:NO3	3	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:NO3	4	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:PERC	2	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:PERC	3	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E300.0:PERC	4	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E601	2	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E601	4	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E8330	2	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E8330	3	Y	817-SRC extraction well.
W-817-01	EW	$Tnbs_2$		DIS	E8330	4	Y	817-SRC extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	817-PRX extraction well.
W-817-03	EW	$Tnbs_2$		DIS	E601	4	Y	817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	817-PRX extraction well.
W-817-03A	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-817-03A	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-817-03A	PTMW	Tps	S	CMP	E601	1	Y	
W-817-03A	PTMW	Tps	S	CMP	E601	3	Y	
W-817-03A	PTMW	Tps	A	CMP	E8330	1	Y	
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$		DIS	E300.0:NO3	4	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$		DIS	E300.0:PERC	4	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$		DIS	E601	4	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	817-PRX extraction well.
W-817-04	EW	$Tnbs_2$		DIS	E8330	4	Y	817-PRX extraction well.
W-817-05	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-817-05	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-817-05	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
W-817-05	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
W-817-05	PTMW	$Tnsc_1$	A	CMP	E8330	1	Y	
W-817-07	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-817-07	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-817-07	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-817-07	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-817-07	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-817-2318	EW	Tpsg	A	CMP	E300.0:NO3	1	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg		DIS	E300.0:NO3	3	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg	A	CMP	E300.0:PERC	1	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg		DIS	E300.0:PERC	3	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg	S	CMP	E601	1	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg		DIS	E601	2	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg	S	CMP	E601	3	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg		DIS	E601	4	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg	A	CMP	E8330	1	Y	817-PRX extraction well.
W-817-2318	EW	Tpsg		DIS	E8330	3	Y	817-PRX extraction well.
W-818-01	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-01	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-01	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-01	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-818-01	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-818-03	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-03	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-03	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-03	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-818-03	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-818-04	PTMW	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-818-04	PTMW	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-818-04	PTMW	$Tnsc_2$	S	CMP	E601	1	Y	
W-818-04	PTMW	$Tnsc_2$	S	CMP	E601	3	Y	
W-818-04	PTMW	$Tnsc_2$	A	CMP	E8330	1	Y	
W-818-06	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-06	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-06	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-06	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-818-06	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-818-07	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-07	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-07	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-07	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-818-07	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E8330	1	Y	815-PRX extraction well.
W-818-11	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-11	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-11	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-11	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-818-11	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-819-02	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-819-02	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-819-02	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
W-819-02	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
W-819-02	PTMW	$Tnsc_1$	A	CMP	E8330	1	Y	
W-823-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-823-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-823-01	PTMW	Tps	S	CMP	E601	1	Y	
W-823-01	PTMW	Tps	S	CMP	E601	3	Y	
W-823-01	PTMW	Tps	A	CMP	E8330	1	Y	
W-823-02	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-02	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-02	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-02	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-823-02	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-823-02	PTMW	$Tnbs_2$		DIS	EM8015:DIESEL	3	Y	
W-823-03	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-03	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-03	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-03	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-823-03	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-823-13	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-13	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-13	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-13	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-823-13	PTMW	$Tnbs_2$	A	CMP	E8330	1	Y	
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
W-827-01	MWB	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-827-01	MWB	$Tnbs_2$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E8330	1	NA	Next sample required 1stQ 2009.
W-827-05	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-827-05	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-827-05	PTMW	$Tnbs_1$	S	CMP	E601	1	Y	
W-827-05	PTMW	$Tnbs_1$	S	CMP	E601	3	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-827-05	PTMW	$Tnbs_1$	A	CMP	E8330	1	Y	
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E300.0:NO3	1	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$		DIS	E300.0:NO3	2	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E300.0:PERC	1	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$		DIS	E300.0:PERC	2	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$	S	CMP-TF	E601	1	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$		DIS	E601	2	Y	829-SRC extraction well.
W-829-06	EW	$Tnsc_1$	S	CMP-TF	E601	3	N	829-SRC extraction well. Facility offline during quarter.
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E8330	2	Y	829-SRC extraction well.
W-829-15	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
W-829-15	DMW	$Tnbs_1$		WGMG	E624	2	Y	
W-829-15	DMW	$Tnbs_1$		WGMG	E8330	2	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	ANIONS	1	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E624	1	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E624	2	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E624	3	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E624	4	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E8330	1	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E8330	2	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E8330	3	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E8330	4	Y	
W-829-1938	DMW	$Tnbs_1$		WGMG	E8330:TNT	1	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	DWMETALS	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	DWMETALS	4	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	E200.7:SI	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	E200.7:SI	4	Y	
W-829-1940	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-829-1940	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-829-1940	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
W-829-1940	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	E624	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	E624	4	Y	
W-829-1940	PTMW	$Tnsc_1$	A	CMP	E8330	1	Y	
W-829-1940	PTMW	$Tnsc_1$		DIS	E8330	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	GENMIN	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	GENMIN	4	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	TBOS	3	Y	
W-829-1940	PTMW	$Tnsc_1$		Baseline	TBOS	4	Y	
W-829-22	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
W-829-22	DMW	$Tnbs_1$		WGMG	E624	2	Y	
W-829-22	DMW	$Tnbs_1$		WGMG	E8330	2	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3	Y	
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	2	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	3	Y	
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	4	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E8330	1	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E8330	3	Y	
W-880-02	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-880-02	GW	Qal	S	CMP	E300.0:NO3	3	Y	
W-880-02	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-880-02	GW	Qal	S	CMP	E300.0:PERC	3	Y	
W-880-02	GW	Qal	Q	CMP	E601	1	Y	
W-880-02	GW	Qal	Q	CMP	E601	2	Y	
W-880-02	GW	Qal	Q	CMP	E601	3	Y	
W-880-02	GW	Qal	Q	CMP	E601	4	Y	
W-880-02	GW	Qal	S	CMP	E8330	1	Y	
W-880-02	GW	Qal	S	CMP	E8330	3	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	3	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	4	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E8330	1	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E8330	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	2	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E601	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	
WELL 18*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:NO3	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E300.0:PERC	4	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20*	WS	$Tnbs_1$	M	WGMG	E502.2	3	Y	
WELL 20*	WS	$Tnbs_1$	M	WGMG	E502.2	3	Y	

Table 2.4-11. High Explosives Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
WELL 20*	WS	$Tnbs_1$	M	WGMG	E502.2	3	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	4	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	4	Y	
WELL 20*	WS	$Tnbs_1$		WGMG	E502.2	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	4	N	See 502.2.
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	4	N	See 502.2.
WELL 20*	WS	$Tnbs_1$	M	CMP	E601	4	N	See 502.2.
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	1	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	2	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	3	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	
WELL 20*	WS	$Tnbs_1$	M	CMP	E8330	4	Y	

Notes:
***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents**
W-829-15, W-829-22, and W-829-1938 are detection monitoring wells. Analytes and sampling frequency are specified in the RCRA Closure Plan for
HEPA primary COC: VOCs (E601, E502.2, or E624).
HEPA secondary COC: nitrate (E300:NO3).
HEPA secondary COC: perchlorate (E300.0:PERC).
HEPA secondary COC: RDX (E8330).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.4-12. Building 815-Source (815-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
815-SRC	July	NA	1.5	2.4	27	19	NA
	August	NA	0.88	1.4	18	13	NA
	September	NA	1.2	1.9	21	15	NA
	October	NA	1.5	2.4	27	19	NA
	November	NA	1.1	1.8	19	14	NA
	December	NA	1.5	2.5	27	19	NA
Total		NA	7.8	12	140	98	NA

Notes:
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.4-13. Building 815-Proximal (815-PRX) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
815-PRX	July	NA	8.9	2.2	26	NA	NA
	August	NA	7.9	1.9	23	NA	NA
	September	NA	7.4	1.8	21	NA	NA
	October	NA	8.9	2.2	26	NA	NA
	November	NA	5.7	1.4	17	NA	NA
	December	NA	3.8	0.96	11	NA	NA
Total		NA	43	11	130	NA	NA

Notes:
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.4-14. Building 815-Distal Site Boundary (815-DSB) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
815-DSB	July	NA	3.1	NA	NA	NA	NA
	August	NA	4.3	NA	NA	NA	NA
	September	NA	4.7	NA	NA	NA	NA
	October	NA	5.7	NA	NA	NA	NA
	November	NA	4.1	NA	NA	NA	NA
	December	NA	3.5	NA	NA	NA	NA
Total		NA	25	NA	NA	NA	NA

Table 2.4-15. Building 817-Source (817-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
817-SRC	July	NA	0	0.068	0.22	0.11	NA
	August	NA	0	0.060	0.19	0.099	NA
	September	NA	0	0.032	0.099	0.052	NA
	October	NA	0	0.060	0.17	0.10	NA
	November	NA	0	0.033	0.094	0.056	NA
	December	NA	0	0.0046	0.013	0.0078	NA
Total		NA	0	0.26	0.78	0.43	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-16. Building 817-Proximal (817-PRX) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
817-PRX	July	NA	3.6	6.2	26	2.1	NA
	August	NA	1.5	3.0	12	1.1	NA
	September	NA	1.8	4.6	17	1.7	NA
	October	NA	3.5	7.5	30	2.6	NA
	November	NA	2.0	4.2	17	1.5	NA
	December	NA	0.00024	0.00012	0.0011	0	NA
Total		NA	12	25	100	8.9	NA

Notes:
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.4-17. Building 829-Source (829-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
829-SRC	July	NA	0.017	0.010	0.088	NA	NA
	August	NA	0.0022	0.0013	0.011	NA	NA
	September	NA	0	0	0	NA	NA
	October	NA	0	0	0	NA	NA
	November	NA	0	0	0	NA	NA
	December	NA	0	0	0	NA	NA
Total		NA	0.020	0.012	0.099	NA	NA

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-01C	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:THISO	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:THISO	4	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:UISO	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	AS:UISO	4	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E8260	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E906	3	Y	
K1-01C	DMW	$Tnbs_1$		WGMG	E906	4	Y	
K1-01C	DMW	$Tnbs_1$		DIS	MS:UISO	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:THISO	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:THISO	4	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:UISO	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	AS:UISO	4	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:NO3	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:NO3	4	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:PERC	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E300.0:PERC	4	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E8260	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E8260	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E8260	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E8260	4	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E906	1	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E906	2	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E906	3	Y	
K1-02B	DMW	$Tnbs_0$		WGMG	E906	4	Y	
K1-02B	DMW	$Tnbs_0$		DIS	MS:UISO	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	4	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	4	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	4	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	4	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	4	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	1	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	2	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	3	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	4	Y	
K1-04	DMW	$Tnbs_1/Tnbs_0$		DIS	MS:UISO	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:THISO	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:THISO	4	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:UISO	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	AS:UISO	4	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E8260	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E906	3	Y	
K1-05	DMW	$Tnbs_1$		WGMG	E906	4	Y	
K1-05	DMW	$Tnbs_1$		DIS	MS:UISO	2	Y	
K1-06	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K1-06	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
K1-06	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
K1-06	PTMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
K1-06	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
K1-06	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
K1-06	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
K1-06	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-07	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:THISO	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:THISO	4	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:UISO	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	AS:UISO	4	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E8260	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E906	3	Y	
K1-07	DMW	$Tnbs_1$		WGMG	E906	4	Y	
K1-07	DMW	$Tnbs_1$		DIS	MS:UISO	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:THISO	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:THISO	4	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:UISO	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	AS:UISO	4	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E8260	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E8260	4	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E906	3	Y	
K1-08	DMW	$Tnbs_1$		WGMG	E906	4	Y	
K1-08	DMW	$Tnbs_1$		DIS	MS:UISO	2	Y	
K1-09	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-09	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-09	DMW	$Tnbs_1$		WGMG	AS:THISO	3	Y	
K1-09	DMW	$Tnbs_1$		WGMG	AS:THISO	4	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-09	DMW	Tnbs$_1$		WGMG	AS:UISO	1	Y	
K1-09	DMW	Tnbs$_1$		WGMG	AS:UISO	2	Y	
K1-09	DMW	Tnbs$_1$		WGMG	AS:UISO	3	Y	
K1-09	DMW	Tnbs$_1$		WGMG	AS:UISO	4	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:NO3	2	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:NO3	3	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:NO3	4	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:PERC	3	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E300.0:PERC	4	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E8260	1	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E8260	2	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E8260	3	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E8260	4	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E906	1	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E906	2	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E906	3	Y	
K1-09	DMW	Tnbs$_1$		WGMG	E906	4	Y	
K1-09	DMW	Tnbs$_1$		DIS	MS:UISO	2	Y	
K2-03	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
K2-03	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	
K2-03	PTMW	Tnbs$_1$	S	CMP	E906	4	Y	
K2-03	PTMW	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
K2-04D*	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
K2-04D*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
K2-04D*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
K2-04D*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	3	Y	
K2-04D*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	4	Y	
K2-04D*	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	
K2-04D*	PTMW	Tnbs$_1$	S	CMP	E906	4	Y	
K2-04D*	PTMW	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
K2-04S*	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
K2-04S*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
K2-04S*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
K2-04S*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	3	Y	
K2-04S*	PTMW	Tnbs$_1$		WGMG	E300.0:PERC	4	Y	
K2-04S*	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	
K2-04S*	PTMW	Tnbs$_1$	S	CMP	E906	4	Y	
K2-04S*	PTMW	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC2-05	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC2-05	PTMW	Tnbs$_1$		DIS	E300.0:PERC	2	Y	
NC2-05	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	
NC2-05	PTMW	Tnbs$_1$	S	CMP	E906	4	Y	
NC2-05	PTMW	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC2-05A	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC2-05A	PTMW	Tnbs$_1$		DIS	E300.0:PERC	2	Y	
NC2-05A	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	
NC2-05A	PTMW	Tnbs$_1$	S	CMP	E906	4	Y	
NC2-05A	PTMW	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC2-06	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC2-06	PTMW	Tnbs$_1$		DIS	E300.0:PERC	2	Y	
NC2-06	PTMW	Tnbs$_1$	S	CMP	E906	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-06	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-06	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-06A	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-06A	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-06A	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-06A	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-06A	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-06A	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC2-09	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-09	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-09	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-09	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-09	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-10	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-10	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-10	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-10	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-10	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11D*	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-11D*	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC2-11D*	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-11D*	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-11D*	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11D*	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC2-11I	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-11I	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC2-11I	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-11I	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-11I	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11S	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-11S	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC2-11S	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-11S	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-11S	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12D*	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12D*	PTMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
NC2-12D*	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-12D*	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-12D*	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12D*	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC2-12I	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12I	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC2-12I	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-12I	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-12I	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12S	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12S	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC2-12S	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-12S	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-12S	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-13	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-13	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-13	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-13	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-14S	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-14S	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC2-14S	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-14S	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-14S	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-15	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-15	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-15	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-15	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-15	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-16	PTMW	$Tnbs_1$	S	CMP	E300.0:NO3	2	Y	
NC2-16	PTMW	$Tnbs_1$	A	CMP	E906	2	Y	
NC2-16	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-16	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-17	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-17	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-17	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-17	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-17	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-18	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-18	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-18	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-18	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-18	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-19	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-19	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-19	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-19	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-19	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-20	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
NC2-20	PTMW	$Tnbs_0$		DIS	E300.0:PERC	2	Y	
NC2-20	PTMW	$Tnbs_0$	S	CMP	E906	2	Y	
NC2-20	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
NC2-20	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC2-21	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-21	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-21	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-21	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC2-21	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-10	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-10	PTMW	$Tnbs_1$		WGMG	E300.0:NO3	4	Y	
NC7-10	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-10	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-10	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-10	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-11	PTMW	$Qal/Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-11	PTMW	$Qal/Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-11	PTMW	$Qal/Tnbs_1$		Baseline	E8330	4	Y	
NC7-11	PTMW	$Qal/Tnbs_1$	S	CMP	E906	2	Y	
NC7-11	PTMW	$Qal/Tnbs_1$	S	CMP	E906	4	Y	
NC7-11	PTMW	$Qal/Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-14	PTMW	$Qal/Tnbs_1$	A	CMP	E300.0:NO3	2	N	Insufficient water to collect sample.

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-14	PTMW	$Qal/Tnbs_1$		DIS	E300.0:PERC	2	N	Insufficient water to collect sample.
NC7-14	PTMW	$Qal/Tnbs_1$	S	CMP	E906	2	N	Insufficient water to collect sample.
NC7-14	PTMW	$Qal/Tnbs_1$	S	CMP	E906	4	N	Dry.
NC7-14	PTMW	$Qal/Tnbs_1$	A	CMP	MS:UISO	2	N	Insufficient water to collect sample.
NC7-15	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-15	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-15	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-15	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-15	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-19	PTMW	$Qal/Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-19	PTMW	$Qal/Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-19	PTMW	$Qal/Tnbs_1$	S	CMP	E906	2	Y	
NC7-19	PTMW	$Qal/Tnbs_1$	S	CMP	E906	4	Y	
NC7-19	PTMW	$Qal/Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-27	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
NC7-27	PTMW	$Tnsc_0$		DIS	E300.0:PERC	2	Y	
NC7-27	PTMW	$Tnsc_0$	S	CMP	E906	2	Y	
NC7-27	PTMW	$Tnsc_0$	S	CMP	E906	4	Y	
NC7-27	PTMW	$Tnsc_0$	A	CMP	MS:UISO	2	Y	
NC7-28	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC7-28	PTMW	$Tnbs_1$		Baseline	E8330	4	Y	
NC7-28	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-28	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-28	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	MS:UISO	3	Y	
NC7-28	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC7-29	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-29	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-29	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-29	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-29	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-43	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-43	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-43	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-43	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-43	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-44	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-44	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-44	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-44	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-44	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-45	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Bent casing.
NC7-45	PTMW	$Tnbs_1$	S	CMP	E906	2	N	Bent casing.
NC7-45	PTMW	$Tnbs_1$	S	CMP	E906	4	N	Bent casing.
NC7-45	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	N	Bent casing.
NC7-46	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-46	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-46	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-46	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-54	PTMW	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-54	PTMW	Qal	S	CMP	E906	2	Y	
NC7-54	PTMW	Qal	S	CMP	E906	4	Y	
NC7-54	PTMW	Qal	A	CMP	MS:UISO	2	Y	
NC7-55	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
NC7-55	PTMW	$Tnbs_1$	S	CMP	E906	2	N	Dry.
NC7-55	PTMW	$Tnbs_1$	S	CMP	E906	4	N	Dry.
NC7-55	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	N	Dry.
NC7-56	PTMW	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-56	PTMW	Qal/$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-56	PTMW	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-56	PTMW	Qal/$Tnbs_1$	S	CMP	E906	4	Y	
NC7-56	PTMW	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-57	PTMW	Qal	A	CMP	E300.0:NO3	2	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E906	2	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E906	4	N	Dry.
NC7-57	PTMW	Qal	A	CMP	MS:UISO	2	N	Dry.
NC7-58	PTMW	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-58	PTMW	Qal		DIS	E300.0:PERC	1	Y	
NC7-58	PTMW	Qal	S	CMP	E906	2	Y	
NC7-58	PTMW	Qal	S	CMP	E906	4	Y	
NC7-58	PTMW	Qal	A	CMP	MS:UISO	2	Y	
NC7-59	PTMW	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-59	PTMW	Qal/$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-59	PTMW	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-59	PTMW	Qal/$Tnbs_1$	S	CMP	E906	4	Y	
NC7-59	PTMW	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-60	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
NC7-60	PTMW	$Tnbs_0$		DIS	E300.0:PERC	1	Y	
NC7-60	PTMW	$Tnbs_0$	S	CMP	E906	2	Y	
NC7-60	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
NC7-60	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC7-61*	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
NC7-61*	PTMW	$Tnbs_0$		WGMG	E300.0:NO3	4	Y	
NC7-61*	PTMW	$Tnbs_0$		WGMG	E300.0:PERC	3	Y	
NC7-61*	PTMW	$Tnbs_0$		WGMG	E300.0:PERC	4	Y	
NC7-61*	PTMW	$Tnbs_0$		Baseline	E8330	4	Y	
NC7-61*	PTMW	$Tnbs_0$	S	CMP	E906	2	Y	
NC7-61*	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
NC7-61*	PTMW	$Tnbs_0$		DIS	MS:UISO	1	Y	
NC7-61*	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC7-61*	PTMW	$Tnbs_0$		DIS	MS:UISO	3	Y	
NC7-61*	PTMW	$Tnbs_0$		DIS	MS:UISO	4	Y	
NC7-62	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-62	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC7-62	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-62	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-62	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-69*	PTMW	Tmss	A	CMP	E300.0:NO3	2	Y	
NC7-69*	PTMW	Tmss		DIS	E601	2	Y	
NC7-69*	PTMW	Tmss		DIS	E601	4	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-69*	PTMW	Tmss	S	CMP	E906	2	Y	
NC7-69*	PTMW	Tmss	S	CMP	E906	4	Y	
NC7-69*	PTMW	Tmss	A	CMP	MS:UISO	2	Y	
NC7-70	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-70	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-70	PTMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
NC7-70	PTMW	$Tnbs_1$		Baseline	E8330	4	Y	
NC7-70	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-70	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-70	PTMW	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-70	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-70	PTMW	$Tnbs_1$		DIS	MS:UISO	3	Y	
NC7-70	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC7-71	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC7-71	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-71	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-71	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-71	PTMW	$Tnbs_1$		DIS	MS:UISO	3	Y	
NC7-72	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-72	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-72	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-72	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-72	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-73	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-73	PTMW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	
NC7-73	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-73	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-73	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-76	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-76	PTMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-76	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-76	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
NC7-76	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
SPRING24	SPR	$Tnbs_0/Tnbs_1$		DIS	E300.0:PERC	2	N	Dry.
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	CMP	E906	2	N	Dry.
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	CMP	E906	4	N	Dry.
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	CMP	MS:UISO	2	N	Dry.
W-850-05	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-850-05	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-850-05	PTMW	$Tnbs_1$		Baseline	E8330	4	Y	
W-850-05	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
W-850-05	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
W-850-05	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-850-05	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$		DIS	E300.0:PERC	2	Y	
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$	S	CMP	E906	2	Y	
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$	S	CMP	E906	4	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$	A	CMP	MS:UISO	2	N	Inadvertently not sampled.
W-850-2145	PTMW	$Tnbs_1/Tnbs_0$		Baseline	TBOS	4	Y	
W-850-2312	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	N	Insufficient personnel.
W-850-2312	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	2	N	Insufficient personnel.
W-850-2312	PTMW	$Tnbs_0$	S	CMP	E906	2	N	Insufficient personnel.
W-850-2312	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
W-850-2312	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	N	Insufficient personnel.
W-850-2312	PTMW	$Tnbs_0$		DIS	MS:UISO	4	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	DWMETALS	1	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	E200.7:SI	1	Y	
W-850-2313	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	1	Y	
W-850-2313	PTMW	$Tnbs_0$		DIS	E300.0:NO3	4	Y	
W-850-2313	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	1	Y	
W-850-2313	PTMW	$Tnbs_0$		DIS	E300.0:PERC	4	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	E624	1	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	E8330	1	Y	
W-850-2313	PTMW	$Tnbs_0$	S	CMP	E906	1	Y	
W-850-2313	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	GENMIN	1	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	KPA	1	Y	
W-850-2313	PTMW	$Tnbs_0$	A	CMP	MS:UISO	1	Y	
W-850-2313	PTMW	$Tnbs_0$		Baseline	TBOS	4	Y	
W-850-2314	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
W-850-2314	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	4	Y	
W-850-2314	PTMW	$Tnbs_0$	S	CMP	E906	2	Y	
W-850-2314	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
W-850-2314	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	N	Inadvertently not sampled.
W-850-2315	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
W-850-2315	PTMW	$Tnbs_0$		DIS	E300.0:PERC	2	Y	
W-850-2315	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	4	Y	
W-850-2315	PTMW	$Tnbs_0$	S	CMP	E906	2	Y	
W-850-2315	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
W-850-2315	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
W-850-2315	PTMW	$Tnbs_0$		Baseline	TBOS	4	Y	
W-850-2316	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	N	No pump in well.
W-850-2316	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	4	N	No pump in well.
W-850-2316	PTMW	$Tnbs_0$	S	CMP	E906	2	N	No pump in well.
W-850-2316	PTMW	$Tnbs_0$	S	CMP	E906	4	N	No pump in well.
W-850-2316	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	N	No pump in well.
W-850-2416	PTMW	$Tnbs_0$	A	CMP	E300.0:NO3	2	N	Inadvertently not sampled.
W-850-2416	PTMW	$Tnbs_0$		WGMG	E300.0:NO3	4	Y	
W-850-2416	PTMW	$Tnbs_0$	A	CMP	E300.0:PERC	4	Y	
W-850-2416	PTMW	$Tnbs_0$		Baseline	E8330	4	Y	
W-850-2416	PTMW	$Tnbs_0$	S	CMP	E906	2	N	Inadvertently not sampled.
W-850-2416	PTMW	$Tnbs_0$	S	CMP	E906	4	Y	
W-850-2416	PTMW	$Tnbs_0$	A	CMP	MS:UISO	2	N	Inadvertently not sampled.
W-850-2416	PTMW	$Tnbs_0$		Baseline	TBOS	4	Y	
W-850-2417	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Inadvertently not sampled.
W-850-2417	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	4	Y	
W-850-2417	PTMW	$Tnbs_1$		Baseline	E8330	4	Y	
W-850-2417	PTMW	$Tnbs_1$	S	CMP	E906	2	N	Inadvertently not sampled.
W-850-2417	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
W-850-2417	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	N	Inadvertently not sampled.
W-850-2417	PTMW	$Tnbs_1$		Baseline	TBOS	4	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-865-1802	PTMW	$Tnbs_0$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-865-1802	PTMW	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	
W-865-1802	PTMW	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4	Y	
W-865-1802	PTMW	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	2	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	4	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4	Y	
W-865-1803	PTMW	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	DWMETALS	1	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	E602	1	Y	
W-PIT1-02*	PTMW	$Tnbs_1$		DIS	E906	1	Y	
W-PIT1-2204	PTMW	Qal/$Tnbs_1$-cong	A	CMP	E300.0:NO3	2	N	Insufficient personnel.
W-PIT1-2204	PTMW	Qal/$Tnbs_1$-cong	A	CMP	E300.0:PERC	2	N	Insufficient personnel.
W-PIT1-2204	PTMW	Qal/$Tnbs_1$-cong	S	CMP	E906	2	N	Insufficient personnel.
W-PIT1-2204	PTMW	Qal/$Tnbs_1$-cong	S	CMP	E906	4	N	Insufficient water to collect sample.
W-PIT1-2204	PTMW	Qal/$Tnbs_1$-cong	A	CMP	MS:UISO	2	N	Insufficient personnel.
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-PIT1-2209	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E300.0:NO3	3	Y	
W-PIT1-2209	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E601	1	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E601	3	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E906	1	Y	
W-PIT1-2209	PTMW	$Tnbs_1$	S	CMP	E906	2	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	E906	3	Y	
W-PIT1-2209	PTMW	$Tnbs_1$	S	CMP	E906	4	Y	
W-PIT1-2209	PTMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
W-PIT1-2209	PTMW	$Tnbs_1$		Baseline	TBOS	4	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$		DIS	E300.0:PERC	1	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	A	CMP	E300.0:PERC	2	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$		DIS	E300.0:PERC	3	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$		DIS	E300.0:PERC	4	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	1	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	2	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	3	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	4	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$	A	CMP	MS:UISO	2	Y	
W-PIT1-2225	GW	$Tnbs_1$/$Tnbs_0$		Baseline	TBOS	4	Y	
W-PIT1-2326	DMW	$Tnbs_1$/$Tnbs_0$		WGMG	AS:THISO	2	Y	
W-PIT1-2326	DMW	$Tnbs_1$/$Tnbs_0$		WGMG	AS:UISO	2	Y	
W-PIT1-2326	DMW	$Tnbs_1$/$Tnbs_0$		WGMG	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT1-2326	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	2	Y	
W-PIT1-2326	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	2	Y	
W-PIT1-2326	DMW	$Tnbs_1/Tnbs_0$		WGMG	MS:UISO	2	Y	
W-PIT7-16	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-PIT7-16	PTMW	$Tnsc_0$	S	CMP	E906	2	Y	
W-PIT7-16	PTMW	$Tnsc_0$	S	CMP	E906	4	Y	
W-PIT7-16	PTMW	$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W8SPRNG	SPR	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
W8SPRNG	SPR	$Tnbs_1$		DIS	E300.0:PERC	1	N	Dry.
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	2	N	Dry.
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	4	N	Dry.
W8SPRNG	SPR	$Tnbs_1$	A	CMP	MS:UISO	2	N	Dry.

Notes:

K1-01C, K1-02B, K1-04, K1-05, K1-07, K1-08, K1-09, and W-PIT1-2326 are Pit 1 Landfill detection monitoring wells. Analytes and sampling frequency are specified in Waste Discharge Requirements for the Pit 1 Landfill (not ncluded in this CMR).

***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents and the results are reported in the LLNL Site Annual Environmental Report.**

Building 850 primary COC: tritium (E906).
Building 850 secondary COC: nitrate (E300.0:NO3).
Building 850 secondary COC: perchlorate (E300.0:PERC) for select wells.
Building 850 secondary COC: uranium (MS:UISO).
Contaminants of Concern in the Vadose Zone not detected in Ground Water: PCBs.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-SRC	July	320	501	860	82,475
	August	580	676	1,562	102,775
	September	510	628	1,374	86,016
	October	787	822	2,160	106,104
	November	458	629	1,262	76,490
	December	287	718	805	81,995
Total		2,942	3,974	8,023	535,855

Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-PRX	July	NA	136	NA	9,805
	August	NA	361	NA	32,360
	September	NA	644	NA	58,254
	October	NA	498	NA	44,887
	November	NA	455	NA	41,203
	December	NA	247	NA	22,373
Total		NA	2,341	NA	208,882

Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-DIS	July	NA	19	NA	1,123
	August	NA	15	NA	882
	September	NA	12	NA	800
	October	NA	15	NA	909
	November	NA	12	NA	564
	December	NA	2	NA	21
Total		NA	75	NA	4,299

Table 2.6-4. Building 854 OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 854-Distal[a]															
854-DIS-GWTS-E	7/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	9/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	10/7/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	11/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	12/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-I	7/10/08	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-I	10/7/08	37	<0.5	0.57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 854-Proximal[a]															
854-PRX-GWTS-E	8/18/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	9/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	11/12/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	12/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	8/18/08	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	10/6/08	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 854-Source															
854-SRC-GWTS-E	7/9/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	9/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	10/6/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	11/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	12/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-I	7/9/08	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-I	10/6/08	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples collected in July due to extraction pump malfunction.

Table 2.6-4 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency
Building 854-Distal		
854-DIS-GWTS-E	**7/10/08**	**0 of 18**
854-DIS-GWTS-E	**8/4/08**	**0 of 18**
854-DIS-GWTS-E	**9/3/08**	**0 of 18**
854-DIS-GWTS-E	**10/7/08**	**0 of 18**
854-DIS-GWTS-E	**11/4/08**	**0 of 18**
854-DIS-GWTS-E	**12/9/08**	**0 of 18**
854-DIS-GWTS-I	**7/10/08**	**0 of 18**
854-DIS-GWTS-I	**10/7/08**	**0 of 18**
Building 854-Proximal[a]		
854-PRX-GWTS-E	**8/18/08**	**0 of 18**
854-PRX-GWTS-E	**9/3/08**	**0 of 18**
854-PRX-GWTS-E	**10/6/08**	**0 of 18**
854-PRX-GWTS-E	**11/12/08**	**0 of 18**
854-PRX-GWTS-E	**12/2/08**	**0 of 18**
854-PRX-GWTS-I	**8/18/08**	**0 of 18**
854-PRX-GWTS-I	**10/6/08**	**0 of 18**
Building 854-Source		
854-SRC-GWTS-E	**7/9/08**	**0 of 18**
854-SRC-GWTS-E	**8/4/08**	**0 of 18**
854-SRC-GWTS-E	**9/3/08**	**0 of 18**
854-SRC-GWTS-E	**10/6/08**	**0 of 18**
854-SRC-GWTS-E	**11/4/08**	**0 of 18**
854-SRC-GWTS-E	**12/2/08**	**0 of 18**
854-SRC-GWTS-I	**7/9/08**	**0 of 18**
854-SRC-GWTS-I	**10/6/08**	**0 of 18**

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples collected in July due to extraction pump malfunction.

Table 2.6-5. Building 854 OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
Building 854-Distal			
854-DIS-GWTS-E	7/10/08	<0.5	<4
854-DIS-GWTS-E	8/4/08	<0.44	<4
854-DIS-GWTS-E	9/3/08	<0.44	<4
854-DIS-GWTS-E	10/7/08	<0.5	<4
854-DIS-GWTS-E	11/4/08	0.5	<4
854-DIS-GWTS-E	12/9/08	0.61	<4
854-DIS-GWTS-I	7/10/08	25	5
854-DIS-GWTS-I	10/7/08	2.5	4.5
Building 854-Proximal[a]			
854-PRX-GWTS-E	8/18/08	27	<4
854-PRX-GWTS-E	9/3/08	40	<4
854-PRX-GWTS-E[b]	9/9/08	<0.5	-
854-PRX-GWTS-E	10/6/08	<0.5 O	<4 O
854-PRX-GWTS-E	11/12/08	<0.5	<4
854-PRX-GWTS-E	12/2/08	2.7	<4
854-PRX-GWTS-I	8/18/08	48	10
854-PRX-GWTS-I	10/6/08	48	9.5
Building 854-Source			
854-SRC-GWTS-E	7/9/08	280 D	<4
854-SRC-GWTS-E	8/4/08	42	<4
854-SRC-GWTS-E	9/3/08	42	<4
854-SRC-GWTS-E	10/6/08	44 O	<4 O
854-SRC-GWTS-E	11/4/08	44	<4
854-SRC-GWTS-E	12/2/08	49	<4
854-SRC-GWTS-I	7/9/08	36 D	4.1
854-SRC-GWTS-I	10/6/08	50	<4

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No samples collected in July due to extraction pump malfunction.

[b] Additional nitrate monitoring to assess acetate injection levels.

Table 2.6-6. Building 854 OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
854-SRC GWTS			
Influent Port	854-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly
854-SRC SVTS			
Influent Port	W-854-1834-854-SRC-VI	No Monitoring Requirements	
Effluent Port	854-SRC-E	VOCs	Weekly[a]
Intermediate GAC	854-SRC-VCF3I	VOCs	Weekly[a]
854-PRX GWTS			
Influent Port	W-854-03-854-PRX-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-PRX-BTU-I	VOCs	Monthly
Effluent Port	854-PRX-E	Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly
854-DIS GWTS			
Influent Port	W-854-2139-854-DIS-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-DIS-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly

Notes:

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

[a] Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.6-7. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING10	SPR	Qls	Q	CMP	E601	1	Y	
SPRING10	SPR	Qls	Q	CMP	E601	2	Y	
SPRING10	SPR	Qls	Q	CMP	E601	3	Y	
SPRING10	SPR	Qls	Q	CMP	E601	4	Y	
SPRING10	SPR	Qls	A	CMP	E300.0:NO3	2	Y	
SPRING10	SPR	Qls	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	1	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	3	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	4	Y	
W-854-01	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-01	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-01	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-01	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-854-02	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	N	854-SRC extraction well. Facility off during quarter.
W-854-02	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	N	854-SRC extraction well. Facility off during quarter.
W-854-02	EW	$Tnbs_1$	S	CMP-TF	E601	2	N	854-SRC extraction well. Facility off during quarter.
W-854-02	EW	$Tnbs_1$	S	CMP-TF	E601	4	Y	854-SRC extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:NO3	1	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:NO3	3	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:NO3	4	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E601	1	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$		DIS	E601	3	Y	854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	S	CMP-TF	E601	4	Y	854-PRX extraction well.
W-854-04	PTMW	Tmss	A	CMP	E300.0:NO3	2	Y	
W-854-04	PTMW	Tmss	A	CMP	E300.0:PERC	2	Y	
W-854-04	PTMW	Tmss	S	CMP	E601	2	Y	
W-854-04	PTMW	Tmss	S	CMP	E601	4	Y	
W-854-05	PTMW	Qls-$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-05	PTMW	Qls-$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-05	PTMW	Qls-$Tnbs_1$	S	CMP	E601	2	Y	
W-854-05	PTMW	Qls-$Tnbs_1$	S	CMP	E601	4	Y	
W-854-06	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-06	PTMW	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-06	PTMW	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-06	PTMW	$Tnsc_0$	S	CMP	E601	4	Y	
W-854-07	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-07	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-07	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-07	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	

Table 2.6-7. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-08	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-08	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-08	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-08	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-854-09	PTMW	$Tnsbs_0$	A	CMP	E300.0:NO3	2	Y	
W-854-09	PTMW	$Tnsbs_0$	A	CMP	E300.0:PERC	2	Y	
W-854-09	PTMW	$Tnsbs_0$	S	CMP	E601	2	Y	
W-854-09	PTMW	$Tnsbs_0$	S	CMP	E601	4	Y	
W-854-10	PTMW	$Tnsbs_0$	A	CMP	E300.0:NO3	2	Y	
W-854-10	PTMW	$Tnsbs_0$	A	CMP	E300.0:PERC	2	Y	
W-854-10	PTMW	$Tnsbs_0$	S	CMP	E601	2	Y	
W-854-10	PTMW	$Tnsbs_0$	S	CMP	E601	4	Y	
W-854-11	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
W-854-11	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	N	Dry.
W-854-11	PTMW	$Tnbs_1$	S	CMP	E601	2	N	Dry.
W-854-11	PTMW	$Tnbs_1$	S	CMP	E601	4	N	Dry.
W-854-12	PTMW	Tmss	B	CMP	E300.0:NO3	2	N	Insufficient water to collect sample.
W-854-12	PTMW	Tmss	B	CMP	E300.0:PERC	2	N	Insufficient water to collect sample.
W-854-12	PTMW	Tmss	B	CMP	E601	2	N	Insufficient water to collect sample.
W-854-13	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-13	PTMW	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-13	PTMW	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-13	PTMW	$Tnsc_0$	S	CMP	E601	4	Y	
W-854-13	PTMW	$Tnsc_0$	B	CMP	E8082A	2	NA	Next sample required 2ndQ 2009.
W-854-14	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-14	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-14	PTMW	$Tnbs_1$	A	CMP	E601	2	Y	
W-854-15	PTMW	Qls	A	CMP	E300.0:NO3	2	Y	
W-854-15	PTMW	Qls	A	CMP	E300.0:PERC	2	Y	
W-854-15	PTMW	Qls	S	CMP	E601	2	Y	
W-854-15	PTMW	Qls	S	CMP	E601	4	Y	
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	A	CMP-TF	E300.0:NO3	1	Y	854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$		DIS	E300.0:NO3	4	Y	854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	A	CMP-TF	E300.0:PERC	1	Y	854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$		DIS	E300.0:PERC	4	Y	854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	S	CMP-TF	E601	1	Y	854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	S	CMP-TF	E601	4	Y	854-SRC extraction well.
W-854-1701	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1701	PTMW	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1701	PTMW	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-1701	PTMW	$Tnsc_0$	S	CMP	E601	4	Y	
W-854-1706	PTMW	Qal-$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
W-854-1706	PTMW	Qal-$Tnbs_1$	A	CMP	E300.0:PERC	2	N	Dry.
W-854-1706	PTMW	Qal-$Tnbs_1$	A	CMP	E601	2	N	Dry.
W-854-1707	PTMW	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1707	PTMW	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1707	PTMW	$Tnsc_0$	S	CMP	E601	2	Y	

Table 2.6-7. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-1707	PTMW	$Tnsc_0$	S	CMP	E601	4	Y	
W-854-1731	PTMW	Tmss	A	CMP	E300.0:NO3	2	Y	
W-854-1731	PTMW	Tmss	A	CMP	E300.0:PERC	2	Y	
W-854-1731	PTMW	Tmss	S	CMP	E601	2	Y	
W-854-1731	PTMW	Tmss	S	CMP	E601	4	Y	
W-854-1822	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-1822	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-1822	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-1822	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-854-1823	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1823	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1823	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	2	Y	
W-854-1823	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	4	Y	
W-854-18A	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$		DIS	E300.0:NO3	4	Y	854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	S	CMP-TF	E601	1	Y	854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	S	CMP-TF	E601	4	Y	854-SRC extraction well.
W-854-19	PTMW	Qls	A	CMP	E300.0:NO3	2	N	Dry.
W-854-19	PTMW	Qls	A	CMP	E300.0:PERC	2	N	Dry.
W-854-19	PTMW	Qls	A	CMP	E601	2	N	Dry.
W-854-1902	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1902	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1902	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	2	Y	
W-854-1902	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	4	Y	
W-854-2115	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-2115	PTMW	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-2115	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	2	Y	
W-854-2115	PTMW	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	4	Y	
W-854-2115	PTMW	$Tnsbs_1$-$Tnsc_0$		DIS	TBOS	4	Y	
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:NO3	1	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	A	CMP-TF	E300.0:NO3	2	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:NO3	3	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:NO3	4	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:PERC	1	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	A	CMP-TF	E300.0:PERC	2	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:PERC	3	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E300.0:PERC	4	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E601	1	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	S	CMP-TF	E601	2	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	E601	3	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	S	CMP-TF	E601	4	Y	854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$		DIS	TBOS	4	Y	854-DIS extraction well.
W-854-2218	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$		DIS	E300.0:NO3	4	Y	854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$		DIS	E300.0:PERC	4	Y	854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	S	CMP-TF	E601	1	Y	854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	S	CMP-TF	E601	4	Y	854-SRC extraction well.

Table 2.6-7. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-45	PTMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-45	PTMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-45	PTMW	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-45	PTMW	$Tnbs_1$	S	CMP	E601	4	Y	
W-854-F2	PTMW	Qls-$Tnbs_1$	B	CMP	E300.0:NO3	2	N	Dry.
W-854-F2	PTMW	Qls-$Tnbs_1$	B	CMP	E300.0:PERC	2	N	Dry.
W-854-F2	PTMW	Qls-$Tnbs_1$	B	CMP	E601	2	N	Dry.

Notes:
Building 854 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).
Building 854 secondary COC: nitrate (E300:NO3).
Building 854 secondary COC: perchlorate (E300.0:PERC).
Contaminants of Concern in the Vadose Zone not detected in Ground Water: PCBs.
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.6-8. Building 854-Source (854-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
854-SRC	July	110	16	0.56	15	NA	NA
	August	200	20	0.75	19	NA	NA
	September	170	16	0.57	16	NA	NA
	October	72	22	0.78	19	NA	NA
	November	42	16	0.57	14	NA	NA
	December	27	18	0.63	15	NA	NA
Total		610	110	3.9	98	NA	NA

Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
854-PRX	July	NA	1.3	0.52	1.7	NA	NA
	August	NA	4.2	1.2	5.9	NA	NA
	September	NA	7.5	2.2	11	NA	NA
	October	NA	6.3	1.6	8.2	NA	NA
	November	NA	5.8	1.5	7.5	NA	NA
	December	NA	3.1	0.80	4.1	NA	NA
Total		NA	28	7.8	38	NA	NA

Table 2.6-10. Building 854-Distal (854-DIS) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
854-DIS	July	NA	0.12	0.021	0.11	NA	NA
	August	NA	0.090	0.017	0.084	NA	NA
	September	NA	0.082	0.015	0.076	NA	NA
	October	NA	0.13	0.016	0.0086	NA	NA
	November	NA	0.080	0.0096	0.0053	NA	NA
	December	NA	0.0030	0.00036	0.00020	NA	NA
Total		NA	0.50	0.079	0.28	NA	NA

Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
832-SRC	July	840	840	211	8,233
	August	624	672	144	7,037
	September	567	663	98	5,676
	October	840	840	116	5,450
	November	576	648	117	3,243
	December	840	840	231	2,670
Total		4,287	4,503	917	32,309

Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
830-SRC	July	730	834	1,118	266,573
	August	669	672	1,096	286,694
	September	664	663	1,221	236,984
	October	840	840	1,465	197,571
	November	650	648	1,151	234,571
	December	838	840	1,423	252,752
Total		4,391	4,497	7,474	1,475,145

Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
830-DISS	July	NA	744	NA	118,604
	August	NA	360	NA	102,459
	September	NA	648	NA	111,016
	October	NA	448	NA	156,602
	November	NA	264	NA	44,479
	December	NA	720	NA	147,622
Total		NA	3,184	NA	680,782

Table 2.7-4. Building 832 Canyon OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 830-Distal South[a]															
Building 830-Source															
830-SRC-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	10/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	11/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	12/1/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-I	7/8/08	170 DO	0.62	<0.5	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-I	10/8/08	2,100 D	2.3	<0.5	<0.5	<0.5	1.1	<0.5	1.2	<0.5	<0.5	0.77	<0.5	<0.5	<0.5
Building 832-Source															
832-SRC-GWTS-E	7/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	8/4/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	9/2/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	10/8/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	11/3/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	12/1/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	7/8/08	120 D	<0.5	2.7	<0.5	<0.5	0.75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	10/8/08	110 D	<0.5	4.6	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] **No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.**

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.7-4 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency	1,2-Dichloroethene (total) (μg/L)
Building 830-Distal South[a]			
Building 830-Source			
830-SRC-GWTS-E	7/8/08	0 of 18	-
830-SRC-GWTS-E	8/4/08	0 of 18	-
830-SRC-GWTS-E	9/2/08	0 of 18	-
830-SRC-GWTS-E	10/8/08	0 of 18	-
830-SRC-GWTS-E	11/3/08	0 of 18	-
830-SRC-GWTS-E	12/1/08	0 of 18	-
830-SRC-GWTS-I	7/8/08	0 of 18	-
830-SRC-GWTS-I	10/8/08	0 of 18	-
Building 832-Source			
832-SRC-GWTS-E	7/8/08	0 of 18	-
832-SRC-GWTS-E	8/4/08	0 of 18	-
832-SRC-GWTS-E	9/2/08	0 of 18	-
832-SRC-GWTS-E	10/8/08	0 of 18	-
832-SRC-GWTS-E	11/3/08	0 of 18	-
832-SRC-GWTS-E	12/1/08	0 of 18	-
832-SRC-GWTS-I	7/8/08	1 of 18	2.7
832-SRC-GWTS-I	10/8/08	1 of 18	4.6

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

[a] No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.

Table 2.7-5. Building 832 Canyon OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
Building 830-Distal South			
830-DISS-GWTS-E	7/9/08	57 D	<4
830-DISS-GWTS-E	8/12/08	48 D	<4
830-DISS-GWTS-E	9/9/08	61	<4
830-DISS-GWTS-E	10/6/08	59 D	<4
830-DISS-GWTS-E	11/5/08	63 D	<4
830-DISS-GWTS-E	12/2/08	64 D	<4
830-DISS-GWTS-I	7/9/08	57 D	<4
830-DISS-GWTS-I	10/6/08	65 D	<4
Building 830-Source			
830-SRC-GWTS-E	7/8/08	20 D	<4
830-SRC-GWTS-E	8/4/08	16 D	<4
830-SRC-GWTS-E	9/2/08	20 D	<4 L
830-SRC-GWTS-E	10/8/08	110 D	<4
830-SRC-GWTS-E	11/3/08	17	<4
830-SRC-GWTS-E	12/1/08	17 D	<4
830-SRC-GWTS-I	7/8/08	140 D	4.3
830-SRC-GWTS-I	10/8/08	120 D	4.8
Building 832-Source			
832-SRC-GWTS-E	7/8/08	100 DL	<4
832-SRC-GWTS-E	8/4/08	85 D	<4
832-SRC-GWTS-E	9/2/08	77 D	<4 L
832-SRC-GWTS-E	10/8/08	79 D	<4
832-SRC-GWTS-E	11/3/08	76 D	<4
832-SRC-GWTS-E	12/1/08	73 D	<4
832-SRC-GWTS-I	7/8/08	88 DL	7.4
832-SRC-GWTS-I	10/8/08	84 D	5.8

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Table 2.7-6. Building 832 Canyon OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
832-SRC GWTS			
Influent Port	832-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	832-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		PH	Monthly
832-SRC SVTS			
Influent Port	832-SRC-VI	No Monitoring Requirements	
Effluent Port	832-SRC-VE	VOCs	Weekly[a]
Intermediate GAC	832-SRC-VCF3I	VOCs	Weekly[a]
830-SRC GWTS			
Influent Port	830-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		PH	Quarterly
Effluent Port	830-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		PH	Monthly
830-SRC SVTS			
Influent Port	830-SRC-VI	No Monitoring Requirements	
Effluent Port	830-SRC-VE	VOCs	Weekly[a]
Intermediate GAC	830-SRC-VCF3I	VOCs	Weekly[a]

Table 2.7-6 (Cont.). Building 832 Canyon treatment facility sampling and analysis plans.

Sample Location	Sample Identification	Parameter	Frequency
830-DISS GWTS			
Influent Port	**830-DISS-I**	**Perchlorate**	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**830-DISS-E**	**Perchlorate**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Notes:

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING3	SPR	Qal	A	CMP	E300.0:NO3	1	Y	
SPRING3	SPR	Qal	A	CMP	E300.0:PERC	1	Y	
SPRING3	SPR	Qal	S	CMP	E601	1	Y	
SPRING3	SPR	Qal	S	CMP	E601	3	Y	
SPRING4	SPR	Tps	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
SPRING4	SPR	Tps	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
SPRING4	SPR	Tps	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
SVI-830-031	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
SVI-830-031	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
SVI-830-031	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-031	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
SVI-830-032	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	N	Dry.
SVI-830-032	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Dry.
SVI-830-032	PTMW	$Tnsc_1$	S	CMP	E601	1	N	Dry.
SVI-830-032	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
SVI-830-033	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
SVI-830-033	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
SVI-830-033	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-033	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
SVI-830-035	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
SVI-830-035	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
SVI-830-035	PTMW	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-035	PTMW	$Tnsc_1$	S	CMP	E601	3	Y	
W-830-04A	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-04A	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-04A	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-04A	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-05	PTMW	$Tnbs_2$-$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-05	PTMW	$Tnbs_2$-$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-05	PTMW	$Tnbs_2$-$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-05	PTMW	$Tnbs_2$-$Tnsc_{1c}$	S	CMP	E601	3	Y	
W-830-07	PTMW	$Tnsc_1$	A	CMP	E300.0:NO3	1	N	Dry.
W-830-07	PTMW	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Dry.
W-830-07	PTMW	$Tnsc_1$	S	CMP	E601	1	N	Dry.
W-830-07	PTMW	$Tnsc_1$	S	CMP	E601	3	N	Dry.
W-830-09	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-09	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-09	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-09	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-10	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-10	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-10	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-10	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-11	PTMW	$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-11	PTMW	$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-11	PTMW	$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-11	PTMW	$Tnsc_{1c}$	S	CMP	E601	3	Y	
W-830-12	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-12	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-12	PTMW	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-830-12	PTMW	Lower $Tnbs_1$	S	CMP	E601	3	N	Pump not operational.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-13	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-830-13	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-830-13	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-830-13	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-830-14	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-14	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-14	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-14	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-15	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-15	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-15	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-15	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	3	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	4	Y	
W-830-17	PTMW	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-830-17	PTMW	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-830-17	PTMW	$Tnbs_2$	S	CMP	E601	1	Y	
W-830-17	PTMW	$Tnbs_2$	S	CMP	E601	3	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	3	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	4	Y	
W-830-18	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-18	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-18	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-18	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-1807	EW	Qal/$Tnsc_1$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$		DIS	E601	2	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$		DIS	E601	4	Y	830-SRC extraction well.
W-830-1829	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	N	830-SRC extraction well. Insufficient water.
W-830-1829	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	N	830-SRC extraction well. Insufficient water.
W-830-1829	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	N	830-SRC extraction well. Insufficient water.
W-830-1829	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-1830	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-1830	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-1830	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-1830	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	3	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	4	Y	
W-830-1832	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-1832	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-1832	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-1832	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-19	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$		DIS	E601	4	Y	830-SRC extraction well.
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	3	Y	
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	3	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	1	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	2	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	3	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	4	Y	
W-830-21	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-21	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-21	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-21	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-22	PTMW	$Tnsc_{1a}$	A	CMP	E300.0:NO3	1	Y	
W-830-22	PTMW	$Tnsc_{1a}$	A	CMP	E300.0:PERC	1	Y	
W-830-22	PTMW	$Tnsc_{1a}$	S	CMP	E601	1	Y	
W-830-22	PTMW	$Tnsc_{1a}$	S	CMP	E601	3	Y	
W-830-2213	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	E300.0:NO3	3	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	E300.0:PERC	2	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	E601	2	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	E601	4	Y	830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		DIS	TBOS	4	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		DIS	E300.0:NO3	2	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		DIS	E601	2	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3	Y	830-SRC extraction well.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-2215	EW	Upper $Tnbs_1$		DIS	E601	4	Y	830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		DIS	TBOS	4	Y	830-SRC extraction well.
W-830-2216	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	E300.0:NO3	3	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	E300.0:PERC	2	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	E300.0:PERC	3	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	E601	2	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$	S	CMP-TF	E601	3	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	E601	4	Y	830-DISS extraction well.
W-830-2216	EW	$Tnbs_2$		DIS	TBOS	4	Y	830-DISS extraction well.
W-830-2311	PTMW	$Tnsc_{1a}$	S	CMP	E300.0:NO3	1	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$		DIS	E300.0:NO3	3	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$	S	CMP	E300.0:PERC	1	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$		DIS	E300.0:PERC	3	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$		DIS	E601	2	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$	S	CMP	E601	3	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$	S	CMP	E624	1	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$		DIS	E624	4	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$	A	CMP	E8330	1	Y	Location type changed from GW to PTMW.
W-830-2311	PTMW	$Tnsc_{1a}$		DIS	TBOS	4	Y	Location type changed from GW to PTMW.
W-830-25	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	N	Dry.
W-830-25	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	N	Dry.
W-830-25	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	N	Dry.
W-830-25	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	N	Dry.
W-830-26	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-26	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-26	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-26	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-27	PTMW	$Tnsc_{1a}$	A	CMP	E300.0:NO3	1	Y	
W-830-27	PTMW	$Tnsc_{1a}$	A	CMP	E300.0:PERC	1	Y	
W-830-27	PTMW	$Tnsc_{1a}$	S	CMP	E601	1	Y	
W-830-27	PTMW	$Tnsc_{1a}$	S	CMP	E601	3	N	Dry.
W-830-28	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-28	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-28	PTMW	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-28	PTMW	Upper $Tnbs_1$	S	CMP	E601	3	Y	
W-830-29	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-29	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-29	PTMW	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-830-29	PTMW	Lower $Tnbs_1$	S	CMP	E601	3	Y	
W-830-30	PTMW	Qal/$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-830-30	PTMW	Qal/$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-30	PTMW	$Qal/Tnsc_1$	S	CMP	E601	1	Y	
W-830-30	PTMW	$Qal/Tnsc_1$	S	CMP	E601	3	Y	
W-830-34	PTMW	$Qal/Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-830-34	PTMW	$Qal/Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-830-34	PTMW	$Qal/Tnsc_1$	S	CMP	E601	1	Y	
W-830-34	PTMW	$Qal/Tnsc_1$	S	CMP	E601	3	Y	
W-830-49	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$		DIS	E300.0:NO3	3	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$		DIS	E601	2	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$		DIS	E601	4	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	S	CMP-TF	E624	1	Y	830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	S	CMP-TF	E624	3	Y	830-SRC extraction well.
W-830-50	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-50	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-50	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-50	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-51	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$		DIS	E601	4	Y	830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	N	830-DISS extraction well;
W-830-53	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	N	830-DISS extraction well;
W-830-54	PTMW	$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-54	PTMW	$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-54	PTMW	$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-54	PTMW	$Tnsc_{1c}$	S	CMP	E601	3	Y	
W-830-55	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-55	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-55	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-55	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-56	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-56	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-56	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-56	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-830-57	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$		DIS	E601	2	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$		DIS	E601	4	Y	830-SRC extraction well.
W-830-58	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-58	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-58	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-58	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-59	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$		DIS	E601	2	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$		DIS	E601	4	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$		DIS	E300.0:PERC	3	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$		DIS	E601	2	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3	Y	830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$		DIS	E601	4	Y	830-SRC extraction well.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2009.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2009.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2009.
W-832-01	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$		DIS	E601	4	Y	832-SRC extraction well.
W-832-06	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-06	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-06	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-832-06	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-832-09	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-832-09	PTMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-832-09	PTMW	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-832-09	PTMW	Lower $Tnbs_1$	S	CMP	E601	3	Y	
W-832-10	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$		DIS	E601	4	Y	832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$		DIS	E601	4	Y	832-SRC extraction well.
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-12	EW	Qal/fill	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-12	EW	Qal/fill	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-13	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	Y	Non-active 832-SRC extraction well.
W-832-13	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	Y	Non-active 832-SRC extraction well.
W-832-13	PTMW	Qal/fill	S	CMP	E601	1	Y	Non-active 832-SRC extraction well.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-832-13	PTMW	Qal/fill	S	CMP	E601	3	Y	Non-active 832-SRC extraction well.
W-832-14	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC extraction well. Dry.
W-832-14	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC extraction well. Dry.
W-832-14	PTMW	Qal/fill	S	CMP	E601	1	N	Non-active 832-SRC extraction well. Dry.
W-832-14	PTMW	Qal/fill	S	CMP	E601	3	N	Non-active 832-SRC extraction well; Dry.
W-832-15	EW	Qal/fill	B	CMP-TF	E8330:R+H	1	NA	832-SRC extraction well. Next sample required 1stQ 2009.
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-15	EW	Qal/fill	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-15	EW	Qal/fill	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-16	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC extraction well. Dry.
W-832-16	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC extraction well. Dry.
W-832-16	PTMW	Qal/fill	S	CMP	E601	1	N	Non-active 832-SRC extraction well. Dry.
W-832-16	PTMW	Qal/fill	S	CMP	E601	3	N	Non-active 832-SRC extraction well; Dry.
W-832-17	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC extraction well. Dry.
W-832-17	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC extraction well. Dry.
W-832-17	PTMW	Qal/fill	S	CMP	E601	1	N	Non-active 832-SRC extraction well. Dry.
W-832-17	PTMW	Qal/fill	S	CMP	E601	3	N	Non-active 832-SRC extraction well; Insufficient water.
W-832-18	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC extraction well. Dry.
W-832-18	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC extraction well. Dry.
W-832-18	PTMW	Qal/fill	S	CMP	E601	1	N	Non-active 832-SRC extraction well. Dry.
W-832-18	PTMW	Qal/fill	S	CMP	E601	3	N	Non-active 832-SRC extraction well; Dry.
W-832-19	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-19	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-19	PTMW	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-19	PTMW	Qal/fill	S	CMP	E601	3	N	Dry.
W-832-1927	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-1927	PTMW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-1927	PTMW	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-832-1927	PTMW	$Tnsc_{1b}$	S	CMP	E601	3	Y	
W-832-20	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC
W-832-20	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC
W-832-20	PTMW	Qal/fill	S	CMP	E601	1	N	Non-active 832-SRC
W-832-20	PTMW	Qal/fill	S	CMP	E601	3	N	Non-active 832-SRC
W-832-21	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-832-21	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-21	PTMW	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-21	PTMW	Qal/fill	S	CMP	E601	3	N	Dry.
W-832-2112	GW	Upper Tnbs$_1$	S	CMP	E300.0:NO3	1	Y	
W-832-2112	GW	Upper Tnbs$_1$	S	CMP	E300.0:NO3	3	Y	
W-832-2112	GW	Upper Tnbs$_1$	S	CMP	E300.0:PERC	1	Y	
W-832-2112	GW	Upper Tnbs$_1$	S	CMP	E300.0:PERC	3	Y	
W-832-2112	GW	Upper Tnbs$_1$	Q	CMP	E601	1	Y	
W-832-2112	GW	Upper Tnbs$_1$	Q	CMP	E601	2	Y	
W-832-2112	GW	Upper Tnbs$_1$	Q	CMP	E601	3	Y	
W-832-2112	GW	Upper Tnbs$_1$	Q	CMP	E601	4	Y	
W-832-2112	GW	Upper Tnbs$_1$		DIS	TBOS	4	Y	
W-832-22	PTMW	Upper Tnbs$_1$	A	CMP	E300.0:NO3	1	N	Non-active 832-SRC extraction well. Dry.
W-832-22	PTMW	Upper Tnbs$_1$	A	CMP	E300.0:PERC	1	N	Non-active 832-SRC extraction well. Dry.
W-832-22	PTMW	Upper Tnbs$_1$	S	CMP	E601	1	N	Non-active 832-SRC extraction well. Dry.
W-832-22	PTMW	Upper Tnbs$_1$	S	CMP	E601	3	N	Non-active 832-SRC extraction well; Dry.
W-832-23	PTMW	Tnsc$_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-23	PTMW	Tnsc$_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-23	PTMW	Tnsc$_{1b}$	S	CMP	E601	1	Y	
W-832-23	PTMW	Tnsc$_{1b}$	S	CMP	E601	3	Y	
W-832-24	PTMW	Tnsc$_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-24	PTMW	Tnsc$_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-24	PTMW	Tnsc$_{1b}$	S	CMP	E601	1	Y	
W-832-24	PTMW	Tnsc$_{1b}$	S	CMP	E601	3	Y	
W-832-25	EW	Tnsc$_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$		DIS	E300.0:NO3	3	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$		DIS	E300.0:PERC	3	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$	S	CMP-TF	E601	1	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$		DIS	E601	2	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$	S	CMP-TF	E601	3	Y	832-SRC extraction well.
W-832-25	EW	Tnsc$_{1b}$		DIS	E601	4	Y	832-SRC extraction well.
W-832-SC1	PTMW	Qal	A	CMP	E300.0:NO3	1	N	Dry.
W-832-SC1	PTMW	Qal	A	CMP	E300.0:PERC	1	N	Dry.
W-832-SC1	PTMW	Qal	S	CMP	E601	1	N	Dry.
W-832-SC1	PTMW	Qal	S	CMP	E601	3	N	Dry.
W-832-SC2	PTMW	Qal	A	CMP	E300.0:NO3	1	N	Dry.
W-832-SC2	PTMW	Qal	A	CMP	E300.0:PERC	1	N	Dry.
W-832-SC2	PTMW	Qal	S	CMP	E601	1	N	Dry.
W-832-SC2	PTMW	Qal	S	CMP	E601	3	N	Dry.
W-832-SC3	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC3	PTMW	Qal	A	CMP	E300.0:PERC	1	Y	
W-832-SC3	PTMW	Qal	S	CMP	E601	1	Y	
W-832-SC3	PTMW	Qal	S	CMP	E601	3	N	Dry.
W-832-SC4	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC4	PTMW	Qal	A	CMP	E300.0:PERC	1	Y	
W-832-SC4	PTMW	Qal	S	CMP	E601	1	Y	
W-832-SC4	PTMW	Qal	S	CMP	E601	3	N	Dry.
W-870-01	PTMW	Qal	A	CMP	E300.0:NO3	1	N	Dry.
W-870-01	PTMW	Qal	A	CMP	E300.0:PERC	1	N	Dry.
W-870-01	PTMW	Qal	S	CMP	E601	1	N	Dry.
W-870-01	PTMW	Qal	S	CMP	E601	3	N	Dry.
W-870-02	PTMW	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
W-870-02	PTMW	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
W-870-02	PTMW	Tnbs$_1$	S	CMP	E601	1	Y	
W-870-02	PTMW	Tnbs$_1$	S	CMP	E601	3	Y	
W-880-01	GW	Tnbs$_2$	S	CMP	E300.0:NO3	NA	NA	See High Explosives Process Area.

Table 2.7-7. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:PERC	NA	NA	See High Explosives Process Area.
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	NA	NA	See High Explosives Process Area.
W-880-02	GW	Qal	S	CMP	E300.0:NO3	NA	NA	See High Explosives Process Area.
W-880-02	GW	Qal	S	CMP	E300.0:PERC	NA	NA	See High Explosives Process Area.
W-880-02	GW	Qal	Q	CMP	E601	NA	NA	See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	NA	NA	See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	NA	NA	See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	Q	CMP	E601	NA	NA	See High Explosives Process Area.

Notes:
Building 830 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).
Building 830 secondary COC: nitrate (E300:NO3).
Building 830 secondary COC: perchlorate (E300.0:PERC).
Building 832 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).
Building 832 secondary COC: nitrate (E300:NO3).
Building 832 secondary COC: perchlorate (E300.0:PERC).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.7-8. Building 832-Source (832-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
832-SRC	July	5.8	2.3	0.17	3.0	NA	NA
	August	4.4	2.3	0.12	2.4	NA	NA
	September	3.0	1.8	0.11	1.9	NA	NA
	October	3.5	2.1	0.11	1.8	NA	NA
	November	7.1	1.3	0.065	1.0	NA	NA
	December	14	0.87	0.061	1.1	NA	NA
Total		38	11	0.63	11	NA	NA

Table 2.7-9. Building 830-Source (830-SRC) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
830-SRC	July	23	110	0.68	10	NA	NA
	August	110	110	0.97	14	NA	NA
	September	110	93	0.74	13	NA	NA
	October	130	88	0.86	13	NA	NA
	November	39	66	0.46	11	NA	NA
	December	48	54	0.37	11	NA	NA
Total		470	530	4.1	73	NA	NA

Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, July 1, 2008 through December 31, 2008.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
830-DISS	July	NA	18	0	23	NA	NA
	August	NA	14	0	20	NA	NA
	September	NA	16	0	22	NA	NA
	October	NA	22	0	31	NA	NA
	November	NA	6.2	0	8.7	NA	NA
	December	NA	24	0	28	NA	NA
Total		NA	100	0	130	NA	NA

Table 2.8-1. Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K8-01	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-01	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-01	PTMW	Upper $Tnbs_1$	S	CMP	E601	2	Y	
K8-01	PTMW	Upper $Tnbs_1$	S	CMP	E601	4	Y	
K8-01	PTMW	Upper $Tnbs_1$		DIS	E906	2	Y	
K8-01	PTMW	Upper $Tnbs_1$		DIS	E906	4	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E340.2	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E601	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$		DIS	E601	4	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E8330	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	1	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	3	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	4	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	T26METALS	2	Y	
K8-03B	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-03B	PTMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-03B	PTMW	Upper $Tnbs_1$	S	CMP	E601	2	Y	
K8-03B	PTMW	Upper $Tnbs_1$	S	CMP	E601	4	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E340.2	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E601	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$		DIS	E601	4	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E8330	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	1	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	3	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	4	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K8-04	CMP DMW	Upper $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	T26METALS	2	Y	

Table 2.8-1. Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K8-05	CMP DMW	$Tnbs_2$	B	CMP	CMPTRIMET	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:NO3	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:PERC	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E340.2	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E601	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E8330	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E906	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:THISO	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:UISO	2	N	Dry.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	T26METALS	2	N	Dry.

Notes:
No COCs in ground water.
CMP Detection monitoring analyte: tritium (E906) sampled quarterly.
CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.
CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.
CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.
CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.
CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.
CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.
CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.
Contaminants of Concern in the Vadose Zone not detected in Ground Water: HE Compounds and uranium.
Building 801 primary COC: VOCs (E601 or E624).
Building 801 secondary COC: nitrate (E300.0:NO3).
Building 801 secondary COC: uranium (MS:UISO) .
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.8-2. Building 833 area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-833-03	PTMW	Tps	A	CMP	E601	1	N	Dry.
W-833-12	PTMW	Tps	A	CMP	E601	1	Y	
W-833-18	PTMW	Tps	A	CMP	E601	1	N	Insufficient water to collect sample.
W-833-22	PTMW	Tps	B	CMP	E601	1	N	Dry.
W-833-28	PTMW	Tps	A	CMP	E601	1	Y	
W-833-30	PTMW	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-833-30	PTMW	Lower $Tnbs_1$	S	CMP	E601	3	Y	
W-833-33	PTMW	Tps	B	CMP	E601	1	Y	
W-833-34	PTMW	Tps	A	CMP	E601	1	N	Dry.
W-833-43	PTMW	Tps	B	CMP	E601	1	N	Dry.
W-840-01	PTMW	Lower $Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-840-01	PTMW	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-840-01	PTMW	Lower $Tnbs_1$		DIS	E601	1	Y	
W-841-01	PTMW	Upper $Tnbs_1$		DIS	E300.0:NO3	1	N	Dry.
W-841-01	PTMW	Upper $Tnbs_1$		DIS	E300.0:PERC	1	N	Dry.
W-841-01	PTMW	Upper $Tnbs_1$		DIS	E601	1	N	Dry.

Notes:
Building 833 primary COC: VOCs (E601).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.8-3. Building 845 Firing Table and Pit 9 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K9-01	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	3	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	4	Y	
K9-01	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K9-01	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K9-01	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	3	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	4	Y	
K9-02	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K9-02	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K9-02	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	3	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	4	Y	
K9-03	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K9-03	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K9-03	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-04	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-04	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-04	CMP DMW	Tmss	Q	CMP	E906	3	Y	

Table 2.8-3. Building 845 Firing Table and Pit 9 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K9-04	CMP DMW	Tmss	Q	CMP	E906	4	Y	
K9-04	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
K9-04	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
K9-04	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	

Notes:
No COCs in ground water.
CMP Detection monitoring analyte: tritium (E906) sampled quarterly.
CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.
CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.
CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.
CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.
CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.
CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.
CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.
Contaminants of Concern in the Vadose Zone not detected in Ground Water: HE Compounds and uranium.
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.8-4. Building 851 area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-851-05	PTMW	Tmss	B	CMP	E601	2	NA	Next sample required 2ndQ 2009.
W-851-05	PTMW	Tmss	A	CMP	E906	2	Y	
W-851-05	PTMW	Tmss	S	CMP	MS:UISO	2	Y	
W-851-05	PTMW	Tmss	S	CMP	MS:UISO	4	Y	
W-851-06	PTMW	Tmss	A	CMP	E906	2	Y	
W-851-06	PTMW	Tmss	S	CMP	MS:UISO	2	Y	
W-851-06	PTMW	Tmss	S	CMP	MS:UISO	4	Y	
W-851-07	PTMW	Tmss	A	CMP	E906	2	Y	
W-851-07	PTMW	Tmss	S	CMP	MS:UISO	2	Y	
W-851-07	PTMW	Tmss	S	CMP	MS:UISO	4	Y	
W-851-08	PTMW	Tmss	A	CMP	E906	2	Y	
W-851-08	PTMW	Tmss	S	CMP	MS:UISO	2	Y	
W-851-08	PTMW	Tmss	S	CMP	MS:UISO	4	Y	

Notes:
Building 851 primary COC: uranium (MS:UISO).
Contaminants of Concern in the Vadose Zone not detected in Ground Water: VOCs (E601).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 3.1-1. Pit 2 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K2-01C*	DMW	$Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K2-01C*	DMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K2-01C*	DMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	E340.2	2	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	E601	2	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	E8330	2	Y	
K2-01C*	DMW	$Tnbs_1$	Q	CMP	E906	1	Y	
K2-01C*	DMW	$Tnbs_1$	Q	CMP	E906	2	Y	
K2-01C*	DMW	$Tnbs_1$	Q	CMP	E906	3	Y	
K2-01C*	DMW	$Tnbs_1$	Q	CMP	E906	4	Y	
K2-01C*	DMW	$Tnbs_1$	B	CMP	MS:THISO	2	N	Sample inadvertantly not collected.
K2-01C*	DMW	$Tnbs_1$		DIS	MS:UISO	1	Y	
K2-01C*	DMW	$Tnbs_1$	B	CMP	MS:UISO	2	Y	
K2-01C*	DMW	$Tnbs_1$		DIS	MS:UISO	3	Y	
K2-01C*	DMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
K2-01C*	DMW	$Tnbs_1$	A	CMP	T26METALS	2	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-08	DMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
NC2-08	DMW	$Tnbs_1$		DIS	E300.0:PERC	3	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	E340.2	2	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	E601	2	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	E8330	2	Y	
NC2-08	DMW	$Tnbs_1$	Q	CMP	E906	1	Y	
NC2-08	DMW	$Tnbs_1$	Q	CMP	E906	2	Y	
NC2-08	DMW	$Tnbs_1$	Q	CMP	E906	3	Y	
NC2-08	DMW	$Tnbs_1$	Q	CMP	E906	4	Y	
NC2-08	DMW	$Tnbs_1$	B	CMP	MS:THISO	2	N	Sample inadvertantly not collected.
NC2-08	DMW	$Tnbs_1$	B	CMP	MS:UISO	2	Y	
NC2-08	DMW	$Tnbs_1$		DIS	MS:UISO	4	Y	
NC2-08	DMW	$Tnbs_1$	A	CMP	T26METALS	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	3	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	E340.2	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	E601	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	E8330	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	Q	CMP	E906	3	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	Q	CMP	E906	4	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
W-PIT2-1934	DMW	Lower $Tnbs_1$		DIS	MS:UISO	1	Y	

Table 3.1-1. Pit 2 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT2-1934	DMW	Lower $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
W-PIT2-1934	DMW	Lower $Tnbs_1$		DIS	MS:UISO	3	Y	
W-PIT2-1934	DMW	Lower $Tnbs_1$	A	CMP	T26METALS	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	3	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	E340.2	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	E601	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	E8330	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	Q	CMP	E906	3	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	Q	CMP	E906	4	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2009.
W-PIT2-1935	DMW	Lower $Tnbs_1$		DIS	MS:UISO	1	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2009.
W-PIT2-1935	DMW	Lower $Tnbs_1$		DIS	MS:UISO	3	Y	
W-PIT2-1935	DMW	Lower $Tnbs_1$	A	CMP	T26METALS	2	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$		DIS	E300.0:NO3	4	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	1	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	2	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	3	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	4	Y	
W-PIT2-2226	GW	$Tnbs_1/Tnbs_0$		DIS	TBOS	4	Y	
W-PIT2-2301	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2301	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2301	PTMW	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2301	PTMW	Qal/WBR	S	CMP	E906	4	N	Insufficient water to collect sample.
W-PIT2-2301	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2302	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2302	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906	4	N	Insufficient water to collect sample.
W-PIT2-2302	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2303	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2303	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2303	PTMW	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2303	PTMW	Qal/WBR	S	CMP	E906	4	N	Insufficient water to collect sample.
W-PIT2-2303	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2304	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT2-2304	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT2-2304	PTMW	Qal/WBR		DIS	E906	1	Y	

Table 3.1-1. Pit 2 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT2-2304	PTMW	Qal/WBR	S	CMP	E906	2	Y	
W-PIT2-2304	PTMW	Qal/WBR	S	CMP	E906	4	Y	
W-PIT2-2304	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
W-PIT2-2304	PTMW	Qal/WBR		DIS	MS:UISO	4	Y	

Notes:
Pit 2 Landfill primary COC: nitrate (E300:NO3).
CMP Detection monitoring analyte: tritium (E906) sampled quarterly.
CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.
CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.
CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.
CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.
CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.
CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.
CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.
***Well sampled as part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) for additional constiutents**
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 4.1-1. Summary of inhalation risks and hazards resulting from transport of contaminant vapors to indoor ambient air.

Area	Pathway and Model	Contaminant	Incremental Risk	Hazard Quotient	Comment
Building 834D	Indoor – JEM	TCE	5.3×10^{-5}	1.0×10^{-1}	Based on a TCE concentration of 21,000 µg/L (3-Apr-2008) in well W-834-D4.
	Indoor – JEM	PCE	1.4×10^{-6}	1.2×10^{-1}	Based on a PCE concentration of 130 µg/L (23-Jan-2008) in well W-834-D13.
Cumulative risk and hazard index			**5.4×10^{-5}**	2.2×10^{-1}	**Institutional controls in place, building only used for storage.**
Building 830	Indoor – JEM	Vinyl Chloride	6.1×10^{-7}	1.2×10^{-3}	Based on the vinyl chloride detection limit of 50 µg/L (17-Jul-2008) in well W-830-34.
	Indoor – JEM	TCE	2.7×10^{-6}	5.2×10^{-3}	Based on a TCE concentration of 670 µg/L (8-Apr-2008) in well W-830-1807.
Cumulative risk and hazard index			**3.3×10^{-6}**	6.4×10^{-3}	**Institutional controls in place, building not occupied.**
Building 833	Indoor – JEM	TCE	4.0×10^{-7}	7.7×10^{-4}	Based on a TCE concentration of 170 µg/L (5-Feb-2008) in well W-833-33.
	Indoor – JEM	Chloroform	1.8×10^{-9}	2.7×10^{-5}	Based on the chloroform detection limit of 0.5 µg/L in sampled wells.
Cumulative risk and hazard index			4.0×10^{-7}	8.0×10^{-4}	**Institutional and engineering controls are in place. The air conditioning unit in Bldg. 833 is operated continuously to maintain neutral pressure differential between the subsurface and indoor air, and to maintain high exchange rates.**

Notes:

JEM – Johnson-Ettinger Model for indoor air pathway (USEPA, GW-ADV Version 3.1; 02/04) incorporates the updated risk values in DTSC (2005) Interim Final Vapor Intrusion Guidance.

Table 4.2-1. Constituent concentration changes and new constiutents detected in surface soil, subsurface soil, and surface water in operable units 2 through 8.

Area	Media	Analyte	Units	Frequency of Detection				Minimum Detected Concentration	Maximum Detected Concentration	Average Detection	Maximum Concentration Reported in 1999 SWFS	Percent Increase from New Results to Old results
Constituents Detected at Concentrations > 50% Historical Maximum												
OU5-B850	Surface Soil	Thorium 232	pCi/g	2	of	2	100%	0.62	1.02	0.82	0.55	85%
OU2	Subsurface Soil	Methylene chloride	mg/kg	23	of	29	79%	0.0005	0.012	0.002	0.0028	329%
OU2	Subsurface Soil	Total Kjeldahl Nitrogen	mg/kg	1	of	2	50%	220	220	220	140	57%
OU4-Spring 14	Surface Water	Ortho-Phosphate	mg/L	3	of	3	100%	0.25	0.4	0.34	0.23	74%
OU4-Spring 14	Surface Water	Selenium	mg/L	3	of	3	100%	0.003	0.016	0.01	0.0086	86%
OU6-Spring 10	Surface Water	Trichloroethene	mg/L	15	of	36	42%	0.00073	0.032	0.01	0.0007	4471%
OU6-Spring 11	Surface Water	Nitrate (as NO3)	mg/L	5	of	7	71%	0.39	21	5.42	2.39	779%
OU6-Spring 11	Surface Water	Trichloroethene	mg/L	5	of	37	14%	0.0008	0.0016	0.00	0.001	60%
OU7-Spring 3	Surface Water	Ammonia Nitrogen (as N)	mg/L	1	of	3	33%	0.1	0.1	0.10	0.02	400%
OU7-Spring 3	Surface Water	trans-1,2-Dichloroethene	mg/L	2	of	26	8%	0.00058	0.00093	0.00	0.00053	75%
OU7-Spring 3	Surface Water	Trichloroethene	mg/L	23	of	26	88%	0.015	0.068	0.03	0.04	70%
OU7-Spring 4	Surface Water	Ammonia Nitrogen (as N)	mg/L	1	of	1	100%	8.7	8.7	8.70	0.16	5338%
OU7-Spring 4	Surface Water	Manganese	mg/L	1	of	1	100%	0.29	0.29	0.29	0.097	199%
OU7-Spring 4	Surface Water	Nitrite (as N)	mg/L	1	of	2	50%	0.36	0.36	0.36	0.14	157%
OU7-Spring 4	Surface Water	Ortho-Phosphate	mg/L	1	of	1	100%	0.574	0.574	0.57	0.37	55%
OU7-Spring 4	Surface Water	Uranium 238	pCi/L	1	of	1	100%	30.2	30.2	30.20	15.4	96%
Constituents Not Historically Detected; Evaluated as New Constituents												
OU5-B850	Surface Soil	Toluene	mg/kg	2	of	2	100%	0.326	0.326	0.33	--	--
OU5-B850	Surface Soil	Potassium 40	pCi/g	2	of	2	100%	11.30	11.40	11.35	--	--
OU5-B850	Surface Soil	Thorium 228	pCi/g	2	of	2	100%	0.873	0.948	0.91	--	--
OU5-B850	Surface Soil	Thorium 228	pCi/g	2	of	2	100%	0.757	0.796	0.78		
OU5-B850	Surface Soil	Thorium 230	pCi/g	2	of	2	100%	1.02	1.16	1.09	--	--
OU5-B850	Surface Soil	PCB 1260	mg/kg	10	of	27	37%	0.035	0.7	0.23	--	--
OU2	Subsurface Soil	TBOS/TKEBs	mg/kg	10	of	25	40%	0.33	270	65	--	--
OU2	Subsurface Soil	Nitrate (as NO3)	mg/kg	5	of	8	63%	8	85	33	--	--
OU5-B850	Subsurface Soil	Americium 243	pCi/g	2	of	6	33%	0.11	0.13	0.12	--	--
OU5-B850	Subsurface Soil	Potassium 40	pCi/g	6	of	6	100%	13	15	14	--	--
OU5-B850	Subsurface Soil	Thorium 228	pCi/g	12	of	12	100%	0.36	0.62	0.49	--	--
OU5-B850	Subsurface Soil	Thorium 230	pCi/g	6	of	6	100%	0.27	0.62	0.47	--	--
OU5-B850	Subsurface Soil	Thorium 232	pCi/g	6	of	6	100%	0.27	0.56	0.44	--	--
OU5-B850	Subsurface Soil	PCB 1260	mg/kg	8	of	10	80%	0.03	14.6	4.3	--	--
OU5-B850	Subsurface Soil	Arsenic	mg/kg	6	of	6	100%	4.45	5.94	5.2	--	--
OU5-B850	Subsurface Soil	Barium	mg/kg	6	of	6	100%	96.4	258	160	--	--
OU5-B850	Subsurface Soil	Cadmium	mg/kg	2	of	6	33%	0.525	0.583	0.6	--	--

Table 4.2-1. Constituent concentration changes and new constiutents detected in surface soil, subsurface soil, and surface water in operable units 2 through 8.

Area	Media	Analyte	Units	Frequency of Detection				Minimum Detected Concentration	Maximum Detected Concentration	Average Detection	Maximum Concentration Reported in 1999 SWFS	Percent Increase from New Results to Old results
Constituents Not Historically Detected; Evaluated as New Constituents (continued)												
OU5-B850	Subsurface Soil	Chromium	mg/kg	6	of	6	100%	17.8	24	21	--	--
OU5-B850	Subsurface Soil	Cobalt	mg/kg	6	of	6	100%	5.33	6.74	6	--	--
OU5-B850	Subsurface Soil	Copper	mg/kg	6	of	6	100%	34.7	117	77	--	--
OU5-B850	Subsurface Soil	Nickel	mg/kg	6	of	6	100%	17.4	27.3	22	--	--
OU5-B850	Subsurface Soil	Selenium	mg/kg	5	of	6	83%	1.98	3.58	2.8	--	--
OU5-B850	Subsurface Soil	Thallium	mg/kg	1	of	6	17%	2.09	2.09	2.1	--	--
OU5-B850	Subsurface Soil	Vanadium	mg/kg	6	of	6	100%	31.1	57	39	--	--
OU5-B850	Subsurface Soil	Zinc	mg/kg	6	of	6	100%	40.8	76.5	62	--	--
OU5-Pit 7	Subsurface Soil	Uranium	mg/kg	17	of	17	100%	1.29	547.32	44	--	--
OU5-Pit 7	Subsurface Soil	Uranium 234	pCi/g	17	of	17	100%	0.34	22.65	2.1	--	--
OU5-Pit 7	Subsurface Soil	Uranium 235	pCi/g	17	of	17	100%	0.02	2.38	0.2	--	--
OU5-Pit 7	Subsurface Soil	Uranium 236	pCi/g	9	of	17	53%	0.008	0.725	0.13	--	--
OU5-Pit 7	Subsurface Soil	Uranium 238	pCi/g	17	of	17	100%	0.43	183.64	14.8	--	--
OU7	Subsurface Soil	Ethylbenzene	mg/kg	1	of	9	11%	0.00069	0.00069	0.001	--	--
OU7	Subsurface Soil	Toluene	mg/kg	1	of	9	11%	0.004	0.004	0.004	--	--
OU7	Subsurface Soil	Perchlorate	mg/kg	1	of	7	14%	0.79	0.79	0.79	--	--
OU4-Spring 5	Surface Water	Perchlorate	mg/L	1	of	1	100%	0.012	0.012	0.01	--	--
OU4-Spring 14	Surface Water	Chloride	mg/L	3	of	3	100%	170	278	229	--	--
OU4-Spring 14	Surface Water	Copper	mg/L	1	of	3	33%	0.02	0.02	0.02	--	--
OU4-Spring 14	Surface Water	Iron	mg/L	1	of	3	33%	0.089	0.089	0.09	--	--
OU4-Spring 14	Surface Water	Nitrite (as N)	mg/L	1	of	3	33%	0.1	0.1	0.10	--	--
OU4-Spring 14	Surface Water	Sulfate	mg/L	3	of	3	100%	80	130	100	--	--
OU4-Spring 14	Surface Water	Total Phosphorus (as P)	mg/L	1	of	1	100%	0.13	0.13	0.13	--	--
OU4-Spring 14	Surface Water	Total Phosphorus (as PO4)	mg/L	2	of	2	100%	0.4	0.7	0.55	--	--
OU5-B850-Well 8 Spring	Surface Water	Perchlorate	mg/L	10	of	10	100%	0.011	0.025	0.02	--	--
OU6-Spring 10	Surface Water	Nitrate (as NO3)	mg/L	7	of	8	88%	0.24	18	7.87	--	--
OU6-Spring 10	Surface Water	Thorium 232	pCi/L	1	of	1	100%	0.0031661	0.0031661	0.00	--	--
OU6-Spring 10	Surface Water	Uranium	pCi/L	1	of	1	100%	30.79254	30.79254	30.79	--	--
OU6-Spring 10	Surface Water	Uranium 234 and Uranium 233	pCi/L	3	of	3	100%	3.14	4.36	3.64	--	--
OU6-Spring 10	Surface Water	Uranium 234 by mass measurement	pCi/L	1	of	1	100%	17.162	17.162	17.16	--	--
OU6-Spring 10	Surface Water	Uranium 235 by mass measurement	pCi/L	1	of	1	100%	0.60354	0.60354	0.60	--	--

Table 4.2-1. Constituent concentration changes and new constiutents detected in surface soil, subsurface soil, and surface water in operable units 2 through 8.

Area	Media	Analyte	Units	Frequency of Detection				Minimum Detected Concentration	Maximum Detected Concentration	Average Detection	Maximum Concentration Reported in 1999 SWFS	Percent Increase from New Results to Old results
Constituents Not Historically Detected; Evaluated as New Constituents (continued)												
OU6-Spring 10	Surface Water	Uranium 238 by mass measurement	pCi/L	1	of	1	100%	13.027	13.027	13.03	--	--
OU6-Spring 11	Surface Water	Perchlorate	mg/L	1	of	9	11%	0.023	0.023	0.02	--	--
OU6-Spring 11	Surface Water	Thorium 232	pCi/L	1	of	1	100%	0.00314	0.00314	0.00	--	--
OU6-Spring 11	Surface Water	Uranium	pCi/L	1	of	1	100%	29.7833	29.7833	29.78	--	--
OU6-Spring 11	Surface Water	Uranium 234 and Uranium 233	pCi/L	3	of	3	100%	15.4	23.1	18.87	--	--
OU6-Spring 11	Surface Water	Uranium 234 by mass	pCi/L	1	of	1	100%	16.495	16.495	16.50	--	--
OU6-Spring 11	Surface Water	Uranium 235 by mass	pCi/L	1	of	1	100%	0.5883	0.5883	0.59	--	--
OU6-Spring 11	Surface Water	Uranium 238 by mass	pCi/L	1	of	1	100%	12.7	12.7	12.70	--	--
OU7-Spring 3	Surface Water	Nitrate plus Nitrite (as N)	mg/L	2	of	2	100%	11	11	11.00	--	--
OU7-Spring 4	Surface Water	Chloride	mg/L	1	of	1	100%	200	200	200.00	--	--
OU7-Spring 4	Surface Water	Nitrate plus Nitrite (as NO3)	mg/L	1	of	1	100%	43.3	43.3	43.3	--	--
OU7-Spring 4	Surface Water	Sulfate	mg/L	1	of	1	100%	50	50	50.00	--	--
OU7-Spring 4	Surface Water	Total Phosphorus (as P)	mg/L	1	of	1	100%	4	4	4.00	--	--
OU7-Spring 4	Surface Water	Tritium	pCi/L	1	of	2	50%	3.2	3.2	3.20	--	--
OU7-Spring 4	Surface Water	Uranium 234 and Uranium 233	pCi/L	1	of	1	100%	34.3	34.3	34.30	--	--

Notes:

-- = Not available.
OU = Operable Unit.
OU2 = Building 834.
OU4 = High Expolsives Process Area.
OU5 = Building 850 (B850)/Pit 7 Complex.
OU6 = Building 854.
OU7 = Building 832 Canyon.
mg/L = mg/L = milligrams per liter.
pCi/L = pCi/L = picoCuries per liter.
SWFS = Site-Wide Feasibility Study.
TBOS/TKEBs = Tetrabutyl orthosilicate/Tetrakis (2-ethylbutyl) silane.

Surface soil data from the following excavated locations were excluded from this evaluation:
OU5, Building 850: 3SS-850-206, 3SS-850-211, 3SS-850-212, 3SS-850-216, 3SS-850-227, and 3SS-850-230.
OU6, Building 854 (Building 855 lagoon): 3SS-854-112 and 3SS-854-200.

The subsurface soil evaluation included data collected from > 0.5 - 6 ft. between October 22, 1999 (SWFS cutoff date) and December 31, 2007; only detected chemicals were evaluated.

Subsurface soil data from the following excavated locations were excluded from this evaluation:
OU5, Building 850: 3SS-850-206, 3SS-850-211, 3SS-850-212, 3SS-850-216, 3SS-850-227, and 3SS-850-230.
OU5, Building 854 (Building 855 former disposal lagoon): 3SS-854-112, 3SS-854-113, 3SS-854-114, 3SS-854-200, 3SS-855-2107, and 3SS-855-2108.

Pit 6 Landfill (OU3) and OU8 were evaluated for chemical changes, however no changes were found.

Table 4.2-2. Comparison of maximum detected constituent concentrations/activities in surface soil (0-0.5 feet) to conservative screening levels.

Area	Analyte	Units	Cal/EPA Regional Board Eco Screening Benchmarks[1]	ORNL Preliminary Remediation Goals for Ecological Endpoints[2]	NOAA Screening Quick Reference Tables, EcoSSL[3]	U.S. EPA EcoSSL[4]	Alternative Soil Ecological Screening Levels[5]	Selected Ecological Screening Level (ESL) [a]	Site-Specific Background Levels [6]	Maximum Detected concentration	Exceedance of Background Levels? [b]	Exceedance of Screening Levels? [c]	TQ [d]	Retained as COPEC?
OU5-B850	Toluene	mg/kg	--	200	5.45	--	--	5.45	--	0.326	NA	No	<1	No
OU5-B850	Potassium 40	pCi/g	--	--	--	--	0.14[e,f]	0.14	--	11.4	NA	Yes	>1	Yes
OU5-B850	Thorium 228	pCi/g	--	--	--	--	0.014[e,g]	0.014	1.56	0.948	No	Yes	>1	No
OU5-B850	Thorium 230	pCi/g	--	--	--	--	3.93[e,h]	3.93	2.29	1.16	No	No	<1	No
OU5-B850	Thorium 232	pCi/g	--	--	--	--	3.44[e,h]	3.44	1.5	1.0	No	No	<1	No
OU5-B850	PCB 1260	mg/kg	--	--	0.332[i]	--	--	0.322	--	0.7	NA	Yes	>1	Yes

Notes:

-- = Screening level or background level not available.
< = Less than.
> = Greater than.
Cal = California.
COPEC = Chemical of Potential Ecological Concern.
EcoSSL = Ecological Soil Screening Level.
EPA = Environmental Protection Agency.
ESL = Ecological screening level.
mg/kg = Milligrams per kilogram.
NA = Not applicable due to lack of screening levels or background levels.
OU = Operable Unit.
pCi/g = PicoCuries per gram.
TQ = Toxicity Quotient.

[a] The lowest ecological screening level for each chemical was used to calculate the toxicity quotient.
[b] The maximum concentration was compared to the site-specific background levels.
[c] The maximum concentration was compared to the 'Selected Ecological Screening Level.
[d] Toxicity Quotient (TQ) is the ratio of the maximum chemical concentration compared to the 'Selected Ecological Screening Level.
[e] Most conservative generic SSLs for the protection of human health among all exposure pathways (U.S. EPA, 2000); used for radionuclides when ecological screening values were not available.
[f] Generic SSL for the Protection of Human Health, ingestion of produce (U.S. EPA, 2000).
[g] Generic SSL for the Protection of Human Health, external radiation exposure (U.S. EPA, 2000).
[h] Generic SSL for the Protection of Human Health, direct ingestion of soil (U.S. EPA, 2000).
[i] Criterion for PCBs (total).

References:

[1] California Regional Water Quality Control Board, 2007. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. INTERIM FINAL - November 2007 (Revised May 2008)
[2] ORNL, 1997. Oak Ridge National Laboratory & U.S. DEPARTMENT OF ENERGY, Preliminary Remediation Goals for Ecological Endpoints. August 1997.
[3] NOAA, 2008. Buchman, M.F., 2008 NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoriation Devision, National Oceanic and Atmospheric Administration, 34 pages.
[4] U.S. EPA, 2008. Ecological Soil Screening Levels.Accessed 1/9/2009. http://www.epa.gov/ecotox/ecossl/
[5] U.S. EPA, 2000. EPA Soil Screening Guidance for Radionuclides. EPA/540-R-00-006.
[6] Ferry et al., 1999. Lawrence Livermore National Laboratory, Final Site-Wide Feasibility Study for Lawrence Livermore National Laboratory, Site 300, November.

Table 4.2-3. Comparison of maximum detected constituent concentrations/activities in subsurface soil (0.5-6 feet) to conservative screening levels.

Area	Analyte	Units	Cal/EPA Regional Board Eco Screening Benchmarks[1]	ORNL Preliminary Remediation Goals for Ecological Endpoints[2]	NOAA Screening Quick Reference Tables, EcoSSL[3]	U.S. EPA EcoSSL[4]	Alternative Soil Ecological Screening Levels	Selected Ecological Screening Levels (ESL) [a]	Site-specific background levels [5]	Maximum detected concentration	Exceedance of background levels? [b]	Exceedance of screening levels? [c]	TQ [d]	Retained as COPEC?
Building 834 (OU2)	Methylene chloride	mg/kg	--	--	4.05	--	--	4.05	--	0.012	NA	No	<1	No
	TBOS/TKEBS	mg/kg	--	--	--	--	--	--	--	270	NA	NA	--	No
	Total Kjeldahl Nitrogen	mg/kg	--	--	--	--	--	--	--	220	NA	NA	--	No
	Nitrate (as NO3)	mg/kg	--	--	--	--	--	--	--	85	NA	NA	--	No
Building 850 (OU5)	Americium 243	pCi/g	--	--	--	--	0.18[e, f, 6]	0.18	--	0.133	NA	No	<1	No
	Potassium 40	pCi/g	--	--	--	--	0.14[e, f, 6]	0.14	21.6	15.2	No	Yes	>1	No
	Thorium 228	pCi/g	--	--	--	--	0.014[e, f, 6]	0.014	--	0.621	NA	Yes	>1	Yes
	Thorium 230	pCi/g	--	--	--	--	3.93[e, g, 6]	3.93	--	0.619	NA	No	<1	No
	Thorium 232	pCi/g	--	--	--	--	3.44[e, h, 6]	3.44	1.3	0.6	No	No	<1	No
	PCB 1260	mg/kg	--	--	0.332[i]	--	--	0.332	--	14.6	NA	Yes	>1	Yes
	Arsenic	mg/kg	20	9.9	5.7	18	--	5.7	8.3	5.94	No	Yes	>1	No
	Barium	mg/kg	750	283	1.04	330	--	1.04	560	258	No	Yes	>1	No
	Cadmium	mg/kg	12	4	0.002	0.36	--	0.002	1.5	0.583	No	Yes	>1	No
	Chromium (total)	mg/kg	8	0.4	0.4[j]	26[k]	--	0.4	78	24	No	Yes	>1	No
	Cobalt	mg/kg	40	20	0.14	13	--	0.14	19	6.74	No	Yes	>1	No
	Copper	mg/kg	225	60	5.4	28	--	5.4	66	117	Yes	Yes	>1	Yes
	Nickel	mg/kg	150	30	13.6	38	--	13.6	140	27.3	No	Yes	>1	No
	Selenium	mg/kg	10	0.21	0.52	0.52	--	0.21	1.5	3.58	Yes	Yes	>1	Yes
	Thallium	mg/kg	--	1	0.0569	--	--	0.0569	14	2.09	No	Yes	>1	No
	Vanadium	mg/kg	200	2	1.59	7.8	--	1.59	130	57	No	Yes	>1	No
	Zinc	mg/kg	600	8.5	6.62	46	--	6.62	91	76.5	No	Yes	>1	No
Pit 7 Complex (OU5)	Uranium[n]	pCi/g	--	5	5	--	100[m]	100	5.7[l]	547.3	Yes	Yes	>1	Yes
	Uranium 234	pCi/g	--	--	--	--	5.02[l, 6]	5.02	1.8	22.65	Yes	Yes	>1	Yes
	Uranium 235	pCi/g	--	--	--	--	0.21[g, h, 6]	0.21	0.094	2.38	Yes	Yes	>1	Yes
	Uranium 236	pCi/g	--	--	--	--	5.33[f, h, 6]	5.33	--	0.725	NA	No	<1	No
	Uranium 238	pCi/g	--	--	--	--	0.98[f, h, 6]	0.98	1.9	183.6	Yes	Yes	>1	Yes
Building 832 Canyon (OU 7)	Ethylbenzene	mg/kg	--	--	5.16	--	--	5.16	--	0.00069	NA	No	<1	No
	Toluene	mg/kg	--	200	5.45	--	--	5.45	--	0.004	NA	No	<1	No
	Perchlorate	mg/kg	--	--	--	--	1[7]	1.0	--	0.79	NA	No	<1	No

Notes:

-- = Screening level or background level not available
< = Less than
> = Greater than
Cal = California
COPEC = Chemical of Potential Ecological Concern
EcoSSL = Ecological Soil Screening Level
EPA = Environmental Protection Agency
ESL = Ecological screening level
mg/kg = Milligrams per kilogram
NA = Not applicable due to lack of screening levels or background levels
OU = Operable Unit

Table 4.2-3. Comparison of maximum detected constituent concentrations/activities in subsurface soil (0.5-6 feet) to conservative screening levels.

Notes (continued):

pCi/g = **PicoCuries per gram**
TBOS/TKEBS = **Tetrabutyl orthosilicate/Tetrakis (2-ethylbutyl) silane**
TQ = Toxicity Quotient

[a] **The lowest ecological screening level for each chemical was used to calculate the toxicity quotient; for uranium the ESL was the LOEC for the earthworm as referenced in the Draft Building 812 Remedial Investigation/Feasibility Study (Taffet et al., 2008).**
[b] **The maximum concentration was compared to the site-specific background levels.**
[c] **The maximum concentration was compared to 'Selected Ecological Screening Levels.'**
[d] **Toxicity Quotient (TQ) is the ratio of the maximum chemical concentration compared to the 'Selected Ecological Screening Level.**
[e] **Most conservative generic SSLs for the protection of human health among all exposure pathways (U.S. EPA, 2000).**
[f] **Generic SSL for the Protection of Human Health, external radiation exposure (U.S. EPA, 2000).**
[g] **Generic SSL for the Protection of Human Health, ingestion of produce (U.S. EPA, 2000).**
[h] **Generic SSL for the Protection of Human Health, direct ingestion of soil (U.S. EPA, 2000).**
[i] **Criterion is for PCBs (total).**
[j] **Use values for chromium III and chromium VI as a surrogate.**
[k] **Use values for chromium III as a surrogate.**
[l] **The total uranium concentration is the sum of all detected uranium isotope concentrations after they were converted from pCi/g to mg/kg based on specific activity.**
[m] **The criterion for uranium is the LOEC for the earthworm endpoint (Sheppard and Evenden, 1992).**

References:

1. California Regional Water Quality Control Board, 2007. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. INTERIM FINAL - November 2007 (Revised May 2008).
2. ORNL, 1997. Oak Ridge National Laboratory & U.S. DEPARTMENT OF ENERGY, Preliminary Remediation Goals for Ecological Endpoints. August 1997.
3. NOAA, 2008. Buchman, M.F., 2008 NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoriation Devision, National Oceanic and Atmospheric Administration, 34 pages.
4. U.S. EPA, 2008. Ecological Soil Screening Levels.Accessed 1/9/2009. http://www.epa.gov/ecotox/ecossl/
5. Ferry et al., 1999. Lawrence Livermore National Laboratory, Final Site-Wide Feasibility Study for Lawrence Livermore National Laboratory, Site 300, November.
6. U.S. EPA, 2000. EPA Soil Screening Guidance for Radionuclides. EPA/540-R-00-006.
7. U.S. EPA, 2002. Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization, NCEA-1-0503.

Table 4.2-4. Comparison of maximum detected constituent concentrations/activities in surface water to conservative screening levels.

Area	Analyte	Units	California Toxic Rule Levels - Freshwater for protection of wildlife[1]	Federal Ambient Water Quality Criteria[2]	Cal/EPA Regional Board Fresh Water Aquatic Habitat Goal (Chronic Toxicity)[3]	Alternative Benchmarks	Selected Ecological Screening Level (ESL)[a]	Site-Specific Background Levels[4]	Maximum Detected Concentration	Exceedance of Background Levels?[b]	Exceedance of Screening Levels?[c]	TQ[d]	Retained as COPEC?
OU4-Spring 5	Perchlorate	mg/L	--	--	0.6	0.6[e,f]	0.6	--	0.012	NA	No	<1	No
OU4-Spring 14	Chloride	mg/L	--	230	--	--	230	--	278	NA	Yes	>1	Yes
OU4-Spring 14	Sulfate	mg/L	--	--	--	500[g]	500	--	130	NA	No	<1	No
OU4-Spring 14	Copper	mg/L	--	--	0.009	--	0.009	0.05	0.020	No	Yes	>1	No
OU4-Spring 14	Iron	mg/L	--	1.0	--	--	1.0	3.8	0.09	No	No	<1	No
OU4-Spring 14	Nitrite (as N)	mg/L	--	--	--	0.4[h,i]	0.4	0.01	0.10	Yes	No	<1	No
OU4-Spring 14	Ortho-Phosphate	mg/L	--	--	--	0.017[i, j]	0.017	--	0.40	NA	Yes	>1	Yes
OU4-Spring 14	Selenium	mg/L	0.0050	0.0050	0.005	0.170 / 4.2[k]	0.005	0.033	0.02	No	Yes	>1	No
OU4-Spring 14	Total Phosphorus (as P)	mg/L	--	--	--	0.017[i, j]	0.017	--	0.13	NA	Yes	>1	Yes
OU4-Spring 14	Total Phosphorus (as PO4)	mg/L	--	--	--	0.017[i, j]	0.017	--	0.70	NA	Yes	>1	Yes
OU5-B850-Well 8 Spring	Perchlorate	mg/L	--	--	0.6	0.6[e,f]	0.6	--	0.025	NA	No	<1	No
OU6-Spring 10	Trichloroethene	mg/L	--	--	0.36	--	0.36	--	0.032	NA	No	<1	No
OU6-Spring 10	Thorium 232	pCi/L	--	--	--	4.49E+02[l]	449	--	0.0032	NA	No	<1	No
OU6-Spring 10	Uranium	mg/L	--	--	--	5.00E-03[m]	0.005	0.028[n]	0.039[o]	Yes	Yes	>1	Yes
OU6-Spring 10	Uranium 234 and Uranium 233	pCi/L	--	--	--	4.00E+03[l, p]	4000	13	4.36	No	No	<1	No
OU6-Spring 10	Uranium 234 by mass measurement	pCi/L	--	--	--	4.04E+03[l]	4040	13	17.16	Yes	No	<1	No
OU6-Spring 10	Uranium 235 by mass measurement	pCi/L	--	--	--	4.36E+06[l]	4.36E+06	1.79	0.60	No	No	<1	No
OU6-Spring 10	Uranium 238 by mass measurement	pCi/L	--	--	--	4.55E+03[l, q]	4550	9.28	13.03	Yes	No	<1	No
OU6-Spring 10	Nitrate (as NO3)	mg/L	--	--	--	0.4[h,i]	0.4	4600	18	No	Yes	>1	No
OU6-Spring 11	Trichloroethene	mg/L	--	--	0.36	--	0.36	--	0.0016	NA	No	<1	No
OU6-Spring 11	Thorium 232	pCi/L	--	--	--	4.49E+02[l]	449	--	0.0031	NA	No	<1	No
OU6-Spring 11	Uranium	mg/L	--	--	--	5.00E-03[m]	0.01	0.028[n]	0.038	Yes	Yes	>1	Yes
OU6-Spring 11	Uranium 234 and Uranium 233	pCi/L	--	--	--	4.00E+03[l, p]	4000	13	23.1	Yes	No	<1	No
OU6-Spring 11	Uranium 234 by mass measurement	pCi/L	--	--	--	4.04E+03[l]	4040	13	16.5	Yes	No	<1	No
OU6-Spring 11	Uranium 235 by mass measurement	pCi/L	--	--	--	4.36E+06[l]	4.36E+06	1.79	0.59	No	No	<1	No
OU6-Spring 11	Uranium 238 by mass measurement	pCi/L	--	--	--	4.55E+03[l, q]	4550	9.28	12.7	Yes	No	<1	No
OU6-Spring 11	Perchlorate	mg/L	--	--	0.6	0.6[e,f]	0.6	--	0.02	NA	No	<1	No
OU6-Spring 11	Nitrate (as NO3)	mg/L	--	--	--	0.4[h,i]	0.4	4600	21.00	No	Yes	>1	No
OU7-Spring 3	Ammonia Nitrogen (as N)	mg/L	--	1.71	--	--	1.71	--	0.10	NA	No	<1	No
OU7-Spring 3	trans-1,2-Dichloroethene	mg/L	--	--	0.59	--	0.59	--	0.00093	NA	No	<1	No
OU7-Spring 3	Trichloroethene	mg/L	--	--	0.36	--	0.36	--	0.068	NA	No	<1	No
OU7-Spring 3	Nitrate plus Nitrite (as N)	mg/L	--	--	--	0.4[h,i]	0.4	0.01[r]	11	Yes	Yes	>1	Yes
OU7-Spring 4	Ammonia Nitrogen (as N)	mg/L	--	1.71	--	--	1.71	--	8.7	NA	Yes	>1	Yes
OU7-Spring 4	Chloride	mg/L	--	230	--	--	230	--	200	NA	No	<1	No
OU7-Spring 4	Sulfate	mg/L	--	--	--	500[g]	500	--	50	NA	No	<1	No
OU7-Spring 4	Tritium	pCi/L	--	--	--	--	--	7.8E+06	3.2	No	NA	>1	No
OU7-Spring 4	Manganese	mg/L	--	--	--	0.12[s]	0.12	0.77	0.29	No	Yes	>1	No

Table 4.2-4. Comparison of maximum detected constituent concentrations/activities in surface water to conservative screening levels.

Area	Analyte	Units	California Toxic Rule Levels - Freshwater for protection of wildlife[1]	Federal Ambient Water Quality Criteria[2]	Cal/EPA Regional Board Fresh Water Aquatic Habitat Goal (Chronic Toxicity)[3]	Alternative Benchmarks	Selected Ecological Screening Level (ESL)[a]	Site-Specific Background Levels[4]	Maximum Detected Concentration	Exceedance of Background Levels?[b]	Exceedance of Screening Levels?[c]	TQ[d]	Retained as COPEC?
OU7-Spring 4	Nitrate plus Nitrite (as NO3)	mg/L	--	--	--	0.4[h,i]	0.4	4600[t]	43.3	No	Yes	>1	No
OU7-Spring 4	Nitrite (as N)	mg/L	--	--	--	0.4[h,i]	0.4	0.01	0.36	Yes	No	<1	No
OU7-Spring 4	Ortho-Phosphate	mg/L	--	--	--	0.017[i, j]	0.017	--	0.57	NA	Yes	>1	Yes
OU7-Spring 4	Total Phosphorus (as P)	mg/L	--	--	--	0.017[i, j]	0.017	--	4.00	NA	Yes	>1	Yes
OU7-Spring 4	Uranium 234 and Uranium 233	pCi/L	--	--	--	4.00E+03[l, p]	4000	13	34.3	Yes	No	<1	No
OU7-Spring 4	Uranium 238	pCi/L	--	--	--	4.55E+03[l, q]	4550	9.28	30.2	Yes	No	<1	No

Notes:

-- = Screening level or background level not available.
< = Less than.
> = Greater than.
Cal = California.
COPEC = Chemical of Potential Ecological Concern.
EcoSSL = Ecological Soil Screening Level.
EPA = Environmental Protection Agency.
ESL = Ecological screening level.
mg/L = Milligrams per liter.
NA = Not applicable due to lack of screening levels or background levels.
OU = Operable Unit.
pCi/L = PicoCuries per liter.
TQ = Toxicity Quotient.

[a] The lowest ecological screening value used to calculate the toxicity quotient (TQ).
[b] The maximum concentration was compared to the site-specific background levels.
[c] The maximum concentration was compared to the 'Selected Ecological Screening Level'.
[d] Toxic Quotient (TQ) is the ratio of the maximum concentration to 'Selected Ecological Screening Level.'
[e] 0.6 mg/L protective of 95% of species during long-term exposures with 80% confidence.
[f] U.S. EPA, 2002. Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization, NCEA-1-0503.
[g] Revised Criteria for Chloride, Sulfate, and Total Dissolved Solids. Iowa Department of Natural Resources, 2006.
[h] Value for total nitrogen as nutrient.
[i] U.S. EPA, 2001. Aggregate Region III. Ambient Water Quality Criteria Recommendations EPA-822-B-01-008.
[j] As total phosphate.
[k] U.S. EPA, 2006. National Recommended Water Quality Criteria. Human Health for Consumption.
[l] Radiological Benchmarks for Screening Contaminants of Potential Concern for Effects on Aquatic Biota. Oak Ridge National Laboratory for the U.S. Department of Energy. 1998.
[m] Sheppard et al. Derivation of Ecotoxicity Thresholds for Uranium. J Environ Radioact. 2005; 79(1):55-83.
[n] Used background level for uranium-238 and converted to mg/L based on specific activity for uranium-238.
[o] The total uranium concentration is the sum of all detected uranium isotope concentrations after they were converted from pCi/L to mg/L based on specific activity.
[p] The screening level for uranium-234 is 4.04E+03 pCi/L (or 6.47E-4 mg/L); the screening level for uranium-233 is 4.00E+03 pCi/L (or 6.4E-4 mg/L). The screening level for uranium-233 was used in the screening evaluation for uranium-234 and -233.
[q] Value for uranium 238 plus all daughter isotopes (progeny radionuclides) that are present at various times throughout the decay process.
[r] Used background level for nitrite (as N).
[s] ORNL Preliminary Remediation Goals for Ecological Endpoints (ORNL, 1997).
[t] Used background level for nitrate (as NO_3).

Table 4.2-4. Comparison of maximum detected constituent concentrations/activities in surface water to conservative screening levels.

Notes (continued):

References:

1. Federal Register, Part III, 40 CFR Part 131, 2000. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule. May 2000.

2. U.S. EPA. 2006. National Recommended Water Quality Criteria. Human Health for Consumption.

3. California Regional Water Quality Control Board, 2007. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final. November 2007 (Revised May 2008).

4. Ferry et al., 1999. Lawrence Livermore National Laboratory, Final Site-Wide Feasibility Study for Lawrence Livermore National Laboratory, Site 300, November.

Table 4.2-5. Summary of new contaminants of potential ecological concern (COPEC) in surface water and surface soil that require additional analysis.

Area	Exposure Pathway	Receptors	COPEC	Five-Year Review Results	Current Status
High Explosives (HE) Process Area (OU 4)					
Spring 14	Aquatic toxicity	Aquatic sp.	Chloride	New chemical detected post-SWFS; not previously analyzed; TQ>1. Known breeding location for special status species within OU4 boundaries.	Limited data set. No background data.
Spring 14	Aquatic toxicity	Aquatic sp.	Ortho-phosphate	Chemical detected at greater than 50% of maximum historical concentration; TQ>1. Known breeding location for special status species within OU4 boundaries.	Limited data set. No background data.
Spring 14	Aquatic toxicity	Aquatic sp.	Total Phosphorus (as P) Total Phosphorus as (PO4)	New chemical detected post-SWFS; not previously analyzed; TQ>1. Known breeding location for special status species within OU4 boundaries.	Limited data set. No background data.
Building 850 (OU 5)					
Surface soil	Absorbed radiation	Ground squirrel Deer Racoon Kit fox American robin Red-tailed hawk	Potassium-40	New chemical detected post-SWFS; not previously analyzed; TQ>1. No special status mammals conclusively detected in post-SWFS surveys.	Limited data set. No background data.
Building 854 (OU 6)					
Spring 10	Aquatic toxicity	Aquatic sp.	Uranium	New chemical detected post-SWFS; not previously analyzed; TQ>1.	Limited data set.

Table 4.2-5. Summary of new contaminants of potential ecological concern (COPEC) in surface water and surface soil that require additional analysis.

Area	Exposure Pathway	Receptors	Analyte	Five-Year Review Results	Current Status
Building 854 (OU 6) continued					
Spring 10	Ingestion of surface water	Amphibians Reptiles	Uranium	New chemical detected post-SWFS. Special status species critical habitat within OU6. Toxicity data insufficient to make ecological hazard determination.	Limited data set.
Spring 11	Aquatic toxicity	Aquatic sp.	Uranium	New chemical detected post-SWFS; not previously analyzed; TQ>1.	Limited data set.
Spring 11	Ingestion of surface water	Amphibians Reptiles	Uranium	New chemical detected post-SWFS. Special status species critical habitat within OU6. Toxicity data insufficient to make ecological hazard determination.	Limited data set.
Building 832 Canyon (OU 7)					
Spring 3	Aquatic toxicity	Aquatic sp.	Nitrate plus Nitrite (as N)	New chemical detected post-SWFS; TQ>1.	Limited data set. No background data.
Spring 4	Aquatic toxicity	Aquatic sp.	Ammonia Nitrogen (as N)	Chemical detected at greater than 50% of maximum historical concentration; TQ>1.	Limited data set. No background data.
Spring 4	Aquatic toxicity	Aquatic sp.	Ortho-phosphate	Chemical detected at greater than 50% of maximum historical concentration; TQ>1.	Limited data set. No background data.
Spring 4	Aquatic toxicity	Aquatic sp.	Total phosphorus (as P)	New chemical detected post-SWFS; not previously analyzed; TQ>1.	Limited data set. No background data.

Notes appear on the following page.

Table 4.2-5. Summary of new contaminants of potential ecological concern (COPEC) in surface water and surface soil that require additional analysis.

Notes:
COPEC = contaminants of potential ecological concern.
HQ = Hazard Quotient.
OU = Operable Unit.
TQ = Toxicity Quotient.

Table 4.2-6. Summary of key species potentially present at Site 300 and selection of Representative Receptors of Ecological Interest (RREIs) for the evaluation of risk to ecological receptors.

	Species newly identified as of October 1999	Operable Unit (OU) where receptor was observed or where suitable habitat occurs	Dietary Strategy	Primary Habitat	How Risk is Assessed for this Receptor
Vegetation[a]					
Blue oak woodland		OU4, OU6	—	—	Ecological soil screening levels or other soil ecological screening levels as shown in Table 4.2-2 and 4.2-3.
Coastal sage scrub		OU5, OU6	—	—	
Northern riparian woodland		Cannot determine[a]	—	—	
Native grasslands		OU2, OU5, OU6	—	—	
Big Tarplant		OU5	—	—	
Large-flowered fiddleneck		OU6	—	—	
Diamond-petaled California poppy		No occurrence[b]	—	—	
Round-leaved filaree		No occurrence[b]	—	—	
Gypsum-loving larkspur		No occurrence[b]	—	—	
California androsace		No occurrence[b]	—	—	
Stinkbells		No occurrence[b]	—	—	
Hogwallow starfish		No occurrence[b]	—	—	
Insects					
Valley elderberry longhorn beetle	X	OU4, OU6	Valley Elderberry	Riparian	
Aquatic Invertebrates[c]					
Vernal pool fairy shrimp		OU5, OU6, OU8	Algae, bacteria	Wetlands, vernal pools, seeps, springs	California Regional Water Quality Control Board - San Francisco Bay Region, California Toxic Rule, or other water quality criteria as shown in Table 4.2-4.
Longhorn fairy shrimp		OU5, OU6, OU8	Algae, bacteria	Wetlands, vernal pools, seeps, springs	

Table 4.2-6. Summary of Key Species Potentially Present at Site 300 and Selection of Representative Receptors of Ecological Interest (RREIs) for the Evaluation of Risk to Site 300 Ecological Receptors (continued).

	Species newly identified as of October 1999	Operable Unit (OU) where receptor was observed or where suitable habitat occurs	Dietary Strategy	Primary Habitat	How Risk is Assessed for this Receptor
Amphibians/Reptiles[d]					
California red-legged frog		OU2, OU3, OU4, OU5, OU6, OU7, OU8	Insectivorous	Wetlands, vernal pools, grassland uplands	Because there is inadequate eco-toxicological data for amphibians/reptiles, concentration of chemicals in soil shown not to pose a risk to other groups (i.e. small mammals) are considered to be protective of both amphibians and reptiles.
California tiger salamander		OU2, OU3, OU4, OU5, OU6, OU7, OU8	Omnivorous	Grasslands, seeps, springs, pools	
Western spadefoot toad		OU4	Omnivorous	Grasslands, woodlands	
Alameda whipsnake		OU3, OU5, OU6, OU8	Omnivorous (carnivorous)	Scrub/chaparall and grasslands	
San Joaquin coachwhip		OU3, OU6, OU8	Omnivorous (carnivorous)	Scrub/chaparall and grasslands	
California legless lizard	X	OU3, OU6, OU8	Insectivorous	Scrub/chaparall	
Coast horned lizard		OU2, OU3, OU4, OU5, OU6, OU7, OU8	Insectivorous	Foothill woodlands, juniper woodlands, grasslands	
Birds					
Grasshopper sparrows	X	OU2, OU3, OU4, OU5, OU6, OU7, OU8			Ecological soil screening levels or other soil ecological screening levels as shown in Table 4.2-2 and 4.2-3, comparison to background concentrations, and calculation of hazard quotients using species that represent the various feeding guilds:
Loggerhead shrikes		OU2, OU3, OU4, OU5, OU6, OU7, OU8	Omnivorous (carnivorous)	Scrub/chaparall and grasslands	
Willow flycatcher	X	*e*	Insectivorous	Riparian areas (high quality)	
Common yellowthroat		*f*	Insectivorous	Riparian areas	
Grasshopper sparrow		*g*	Insectivorous	Grasslands	
Yellow warbler		*g*	Insectivorous	Riparian areas	

Table 4.2-6. Summary of Key Species Potentially Present at Site 300 and Selection of Representative Receptors of Ecological Interest (RREIs) for the Evaluation of Risk to Site 300 Ecological Receptors (continued).

	Species newly identified as of October 1999	Operable Unit (OU) where receptor was observed or where suitable habitat occurs	Dietary Strategy	Primary Habitat	How Risk is Assessed for this Receptor
Birds (continued)					
Tri-colored Blackbird		*g*	Insectivorous/ herbivorous	Riparian areas (high quality)	Red-Tailed Hawk (carnivorous bird), Burrowing Owl (insectivorous/ carnivorous bird) and American Robin (insectivorous/ herbivorous).
Burrowing owl		OU2, OU3, OU4, OU5, OU6, OU7, OU8	Omnivorous (carnivorous)	Grassland	
Red-Tailed Hawk		Site-wide	Carnivorous	Grassland, scrub, some woodlands	
Mammals[h]					
San Joaquin kit fox		Site-wide	Carnivorous	Grassland	Ecological soil screening levels or other soil ecological screening levels as shown in Table 4.2-2 and 4.2-3, comparison to background concentrations, and calculation of hazard quotients using species that represent the various feeding guilds: kit fox (carnivorous), raccoon (omnivorous/ carnivorous), black-tailed Deer (herbivorous) and California ground squirrel (granivorous/ herbivorous).
American badger		Site-wide	Omnivorous/ carnivorous	Grasslands, woodlands	
Raccoon		Site-wide	Omnivorous (carnivorous)	Grasslands, woodlands, disturbed areas	
Ground Squirrel		Site-wide	Granivorous/ herbivorous	Grassland	
Black-Tailed Deer		Site-wide	Herbivorous	Woodland, scrub, chaparral	
Pallid bat		*i*	Insectivorous	Oak woodlands	
Western red bat		*i*	Insectivorous	Forests, woodlands, grasslands	

Table 4.2-6. Summary of key species potentially present at Site 300 and selection of Representative Receptors of Ecological Interest (RREIs) for the evaluation of risk to ecological receptors (continued).

Notes:

[a] **Comparison by OU is not possible because this habitat type is not depicted on the most recent vegetation communities map provided by LLNL biologists.**

[b] **Comparison by OU is not possible because these species or suitable habitat only occurs outside the OU boundaries or insufficient information was provided to determine which OUs contain these species or suitable habitat.**

[c] **While pools in these OUs may provide suitable habitat for special-status branchipods, none have been detected in these location.**

[d] **The OUs identified are based on suitable habitat for these species in various OUs and not necessarily on confirmed observations or detections.**

[e] **The only suitable habitat for the willow flycatcher within Site 300 is in the Elk Ravine, which is located outside of the OU boundaries that were evaluated.**

[f] **Species was observed off-site in the Coral Hollow Ecological Preserver, but suitable habitat likely present in Elk Ravine outside the boundaries of OUs that were evaluated.**

[g] **Species was observed within Site 300 but not within OU boundaries that were evaluated.**

[h] **No location-specific information regarding detections of the mammals listed are available to facilitate classification by OU.**

[I] **Species could occur along riparian or woodland corridors and adjacent grasslands.**

Table 4.2-7. Exposure point concentrations in surface and subsurface soil at Operable Unit (OU) 5.

Chemical	Sampling Location	Maximum Soil Concentration (mg/kg dw)
Surface Soil		
PCB 1260	**OU5**	**0.7**
Subsurface Soil		
Copper	**OU5**	**117**
Selenium	**OU5**	**3.58**
Uranium	**OU5**	**550**
Uranium (Mean)	**OU5**	**44**
PCB 1260	**OU5**	**14.6**

Notes:

dw = Dry weight.

mg/kg = Milligrams per kilogram.

OU = OU.

Table 4.2-8. Exposure point concentrations for wildlife receptors at Operable Unit 5.

Chemical	Soil Concentration (mg/kg dw)	Soil to Terrestrial Plant BAF	Estimated Terrestrial Plant Concentration[a] (mg/kg ww)	Soil to Terrestrial Invertebrate BAF	Estimated Terrestrial Invertebrate Concentration[a] (mg/kg ww)	Soil to Small Mammal BAF	Estimated Small Mammal Concentration (mg/kg ww)
PCB 1260	0.70	0.052[b]	0.0073	3.6[c]	0.50	0.12[d]	0.017

Notes:

BAF = Bioaccumulation factor.

dw = Dry weight.

mg/kg = Milligrams per kilogram.

ww = Wet weight.

[a] Includes a dw:ww conversion factor of 0.2 (Boese and Lee, 1992).

[b] U.S. EPA, 2005.

[c] Sample et al., 1999.

[d] ENVIRON.

Burrow air was sampled in 2004 for the presence of VOCs in the Pit 6 Landfill and Building 834 survey areas. The results indicated that burrow air did not contain VOCs at concentrations that would result in a hazard quotient (HQ) greater than 1. Since there is no potential for ecological harm, VOCs in burrow air has been deleted from the list of ecological contaminants of concern and was not considered in this model.

Table 4.2-9. Calculation of food ingestion rates for wildlife receptors at Operable Unit 5.

k	P_k (percent)	GE (kcal/g ww)	AE (percent)	ME_k [a] (kcal/g ww)	(NFMR) (kcal/kg-d)	NIR_{total} [b] (g/kg-d)	NIR_{total} (g/g-d)	BW (kg)	FIR[c] (kg/day)
American Robin (representing Tricolored Blackbird)					713[i]	803	0.80	0.077[j]	0.062
Terrestrial Plants	28%[d]	1.1[e]	64%[g]	0.70					
Terrestrial Invertebrates	72%[d]	1.3[f]	72%[h]	0.96					
Burrowing Owl					367[n]	368	0.37	0.12[j]	0.044
Terrestrial Invertebrates	91%[k]	1.3[f]	72%[h]	0.96					
Small Mammals	9%[k]	1.7[l]	78%[m]	1.3					
Red-tailed Hawk					197[o]	148	0.15	1.1[j]	0.17
Small Mammals[p]	100%[d]	1.7[l]	78%[m]	1.3					
California Ground Squirrel					247[u]	74	0.074	0.56[v]	0.041
Terrestrial Plants	80%[q]	4.6[r]	85%[s]	3.9					
Terrestrial Invertebrates	20%[q]	1.3[f]	87%[t]	1.2					
Black-tailed Deer					110[y]	106	0.11	60[v]	6.4
Terrestrial Plants	100%[q]	1.4[w]	76%[x]	1.0					
Raccoon					185[o]	161	0.16	5.8[j]	0.93
Terrestrial Plants	22%[d]	1.4[w]	76%[x]	1.0					
Terrestrial Invertebrates	64%[d]	1.3[f]	87%[t]	1.1					
Small Mammals[p]	14%[d]	1.7[l]	84%[z]	1.4					
Kit Fox					191[aa]	133	0.13	2.2[v]	0.29
Small Mammals[p]	100%[q]	1.7[l]	84%[z]	1.4					

Notes appear on the following page.

Table 4.2-9. Calculation of food ingestion rates for wildlife receptors at Operable Unit 5.

Notes:

AE =	Assimilation Efficiency.	kcal/kg-d =	kilocalorie per kilogram per day.
BW =	Body weight.	kcal/kJ =	kilocalorie per kilojoules.
FIR =	Food Ingestion Rate.	kg =	Kilogram.
GE =	Gross Energy.	kg/day =	kilogram per day.
g/g-d =	gram per gram per day.	ME_k =	Metabolic Energy.
g/kg-d =	gram per kilogram per day.	NFMR =	NormalizedFree-living Metabolic Rate.
k =	Prey type.	NIR_{total} =	Total Normalized Ingestion Rate.
kcal/g ww =	kilocalorie per gram (wet weight).	P_k =	Proportion of Diet.

[a] ME_k = GE x AE.
[b] NIR = NFMR/($\sum P_k$ x ME_k).
[c] FIR = NIR (g/g-day) x BW.
[d] Average of spring and summer (breeding season) adult diet percentages (U.S. EPA, 1993).
[e] Fruit pulp and skin (U.S. EPA, 1993).
[f] Average terrestrial invertebrate value (U.S. EPA, 1993).
[g] Value for birds eating fruit pulp and skin (U.S. EPA, 1993).
[h] Value for birds eating terrestrial invertebrates (U.S. EPA, 1993).
[I] Free-living metabolic rate (U.S. EPA, 1993).
[j] U.S. EPA (1993).
[k] Estimated from Sample et al., 1997.
[l] Average small mammal value (U.S. EPA, 1993).
[m] Value for birds of prey eating birds/small mammals (U.S. EPA, 1993).
[n] Average male and female free-living metabolic rate for American kestrel (U.S. EPA, 1993).
[o] Average male and female free-living metabolic rate (U.S. EPA, 1993).
[p] Small mammals used as a surrogate for the small proportion of birds, amphibians, and reptiles also consumed.
[q] Estimated value.
[r] Seeds (U.S. EPA, 1993).
[s] Value for voles/mice eating seeds/nuts (U.S. EPA, 1993).
[t] Value for small mammals consuming insects (U.S. EPA, 1993).
[u] Average NFMR for antelope ground squirrel and golden-mantled ground squirrel, using conversion factor of 0.239 kcal/kJ (Nagy, 1999).
[v] Final Site-Wide Remedial Investigaiton Report LLNL Site 300 (1994).
[w] Average of wet weight adjusted gross efficiencies for all terrestrial plants (U.S. EPA, 1993).
[x] Value for rabbits/voles/rats and herbivory (U.S. EPA, 1993).
[y] Value for mule deer, using conversion factor of 0.239 kcal/kJ (Nagy, 1999).
[z] Value for mammals consuming small birds/mammals (U.S. EPA, 1993).
[aa] Value for kit fox, using conversion factor of 0.239 kcal/kJ (Nagy, 1999).

Table 4.2-10a. Calculation of total daily intakes for wildlife receptors at Operable Unit 5.

Chemical	Proportion of Diet (percent)			FIR (kg/day)	SIR [a] (kg/day)	BW (kg)	FR (acres)	AUF [b] (unitless)	TDI [c] (mg/kg-day)
	Terrestrial Plants	Terrestrial Invertebrates	Small Mammals						
American Robin	28%	72%		0.062	0.0013[d]	0.077	2.0[e]	1	
PCB 1260									0.30
Burrowing Owl		91%	9%	0.044	0.0012[f]	0.12	55[g]	1	
PCB 1260									0.18
Red-tailed Hawk			100%	0.17	0.0035[d]	1.1	148[h]	1	
PCB 1260									0.0046
California Ground Squirrel	80%	20%		0.041	0.00063[i]	0.56	0.4[j]	1	
PCB 1260									0.0086
Black-tailed Deer	100%			6.4	0.025[k]	60	640[j]	1	
PCB 1260									0.0011
Raccoon	22%	64%	14%	0.93	0.017[l]	5.8	128[m]	1	
PCB 1260									0.055
Kit Fox			100%	0.29	0.0016[n]	2.2	320[j]	1	
PCB 1260									0.0028

Notes appear on the following page.

Table 4.2-10a. Calculation of total daily intakes for wildlife receptors at Operable Unit 5.

Notes:

AUF =	Area Use Factor.
BW =	Body weight.
FIR =	Food Ingestion Rate.
FR =	Foraging Range.
kg =	Kilogram.
kg/day =	kilogram per day.
mg/kg-day =	Milligrams per kilogram per day.
SIR =	Soil Ingestion Rate.
TID =	Total Daily Intake.

[a] Ingestion rates from Beyer et al. 1994, using a dry weight to wet weight conversion factor of 0.2 (Boese and Lee 1992).
[b] AUF = FR/Area of OU5 (X acres), not exceeding 1.0.
[c] *TDI = ∑((FIR x Ci x Pi)+(SIR x Csl)) x 1/BW x AUF.*

where: Ci = concentration in ith prey item.
Pi = proportion of ith prey item.
Csl = concentration in soil.

[d] Assumed similar to American woodcock.
[e] Estimated from fledglings (USEPA 1993).
[f] Estimated from Sample et al. (1997).
[g] Based on adult male and female winter territory size (USEPA 1993).
[h] Based on adult male and female spring territory size (USEPA 1993).
[I] Assumed similar to black-tailed prairie dog.
[j] Final Site-Wide Remedial Investigation Report LLNL Site 300 (1994).
[k] Assumed similar to white-tailed deer.
[l] Based on raccoon.
[m] Based on adult male and female all year home range size (USEPA 1993).
[n] Assumed similar to red fox.

Table 4.2-10b. Calculation of total daily intakes for wildlife receptors at Operable Unit 5.

Chemical	Proportion of Diet: Terrestrial Plants (percent)	Proportion of Diet: Terrestrial Invertebrates (percent)	Proportion of Diet: Small Mammals (percent)	FIR (kg/day)	SIR [a] (kg/day)	BW (kg)	FR (acres)	AUF [b] (unitless)	TDI [c] (mg/kg-day)
Burrowing Owl		91%	9%	0.044	0.0012 [d]	0.12	55 [e]	1	
Copper									1.163
Selenium									0.036
Uranium (Max)									5.469
Uranium (Mean)									0.438
PCB 1260									0.145
California Ground Squirrel	80%	20%		0.041	0.00063 [f]	0.56	0.4 [g]	1	
Copper									0.132
Selenium									0.004
Uranium (Max)									0.623
Uranium (Mean)									0.050
PCB 1260									0.017
Kit Fox			100%	0.29	0.0016 [h]	2.2	320 [g]	1	
Copper									0.087
Selenium									0.003
Uranium (Max)									0.411
Uranium (Mean)									0.033
PCB 1260									0.011

Notes appear on the following page.

Table 4.2-10b. Calculation of total daily intakes for wildlife receptors at Operable Unit 5.

Notes:

AUF =	Area Use Factor.
BW =	Body weight.
FIR =	Food Ingestion Rate.
FR =	Foraging Range.
kg =	Kilogram.
kg/day =	kilogram per day.
mg/kg-day =	Milligrams per kilogram per day.
SIR =	Soil Ingestion Rate.
TID =	Total Daily Intake.

All chemicals were detected at maximum concentrations at OU5.

[a] Ingestion rates from Beyer et al. 1994, using a dry weight to wet weight conversion factor of 0.2 (Boese and Lee, 1992).

[b] AUF = FR/Area of OU5 (X acres), not exceeding 1.0.

[c] $TDI = \sum((FIR \times Ci \times Pi)+(SIR \times Csl)) \times 1/BW \times AUF.$

where: Ci = concentration in the prey item.

Pi = proportion of the prey item.

Csl = concentration in soil.

[d] Estimated from Sample et al. (1997).

[e] Based on adult male and female winter territory size (U.S. EPA, 1993).

[f] Assumed similar to black-tailed prairie dog.

[g] Site-wide remedial investigation report LLNL Site 300 (1994).

[h] Assumed similar to red fox.

Table 4.2-11a. Estimation of risk for wildlife receptors at Operable Unit 5.

Constituent	TDI (mg/kg-day)	TRV[a] (mg/kg-day)	HQ[b] (unitless)
American Robin			
PCB 1260	0.30	1.8 [c]	0.2
Burrowing Owl			
PCB 1260	0.18	1.8 [c]	0.1
Red-tailed Hawk			
PCB 1260	0.0046	1.8 [c]	0.003
California Ground Squirrel			
PCB 1260	0.0086	0.3 [d]	0.03
Black-tailed Deer			
PCB 1260	0.0011	0.3 [d]	0.003
Raccoon			
PCB 1260	0.055	0.3 [d]	0.2
Kit Fox			
PCB 1260	0.0028	0.3 [d]	0.009

Notes:

HQ = Hazard quotient.
mg/kg-day = Milligram per kilogram per day.
TDI = Total daily intake.
TRV = Toxicity reference value.

[a] Based on NOAEL values.
[b] HQ = TDI/TRV.
[c] Fernie et al., 2001a,b.
[d] Linder et al., 1974.

Table 4.2-11b. Estimation of risk for wildlife receptors at Operable Unit 5.

Constituent		TDI (mg/kg-day)	TRV[a] (mg/kg-day)	HQ[b] (unitless)
Burrowing Owl				
Copper				
	Low TRV	**1.16**	**2.3 [c]**	**0.51**
	High TRV	**1.16**	**52.3 [c]**	**0.02**
Selenium				
	Low TRV	**0.04**	**0.23 [d]**	**0.15**
	High TRV	**0.04**	**0.93 [d]**	**0.04**
Uranium (Max)		**5.47**	**16 [e]**	**0.34**
Uranium (Mean)		**0.44**	**16 [e]**	**0.03**
PCB 1260		**0.15**	**1.8 [f]**	**0.08**
California Ground Squirrel				
Copper				
	Low TRV	**0.13**	**2.67 [c]**	**0.05**
	High TRV	**0.10**	**632 [c]**	**0.0002**
Selenium				
	Low TRV	**0.004**	**0.05 [d]**	**0.08**
	High TRV	**0.004**	**1.21 [d]**	**0.003**
Uranium (Max)		**0.6**	**0.28 [g]**	**2.22**
Uranium (Mean)		**0.05**	**0.28 [g]**	**0.18**
PCB 1260		**0.02**	**0.3 [h]**	**0.05**
Kit Fox				
Copper				
	Low TRV	**0.09**	**2.67 [c]**	**0.03**
	High TRV	**0.09**	**632 [c]**	**0.0001**
Selenium				
	Low TRV	**0.003**	**0.05 [d]**	**0.05**
	High TRV	**0.003**	**1.21 [d]**	**0.002**
Uranium (Max)		**0.41**	**0.77 [g]**	**0.53**
Uranium (Mean)		**0.03**	**0.77 [g]**	**0.04**
PCB 1260		**0.01**	**0.3 [i]**	**0.03**

Notes appear on the following page.

Table 4.2-11b. Estimation of risk for wildlife receptors at Operable Unit 5.

Notes:

HQ = Hazard quotient.
mg/kg-day = Milligram per kilogram per day.
TDI = Total daily intake.
TRV = Toxicity reference value.

[a] Based on NOAEL values.
[b] HQ = TDI/TRV
[c] California DTSC. http://www.dtsc.ca.gov/AssessingRisk/eco.cfm. Low TRV: Pocino et al., 1991; High TRV: Hebert et al., 1993.
[d] California DTSC. http://www.dtsc.ca.gov/AssessingRisk/eco.cfm. Low TRV: Harr et al., 1967; High TRV: Schroeder & Mitchener, 1971.
[e] Haseltine and Silo - Based on black duck NOAEL TRV of 160/uncertainty factor of 10 = 16 mg U/kg/d.
[f] Fernie et al. 2001a,b.
[g] Paternain et al., 1989; Dominigo et al., 1989a and b - Based on mouse NOAEL/LOAEL TRV (depending on endpoint) of 2.8/uncertainty factor of 10 = 0.28 mg U/kg/d.
[h] Linder et al. 1974.
[i] Maynard and Hodge - Based on dog NOAEL TRV of 7.7/uncertainty factor of 10 = 0.77 mg U/kg/d.

Table 4.2-12. Hazard quotients for wildlife receptors at Operable Unit 5.

Chemical	American Robin	Burrowing Owl	Red-Tailed Hawk	California Ground Squirrel	Black-Tailed Deer	Raccoon	Kit Fox
Surface Soil COPEC							
PCB 1260	0.2	0.1	0.003	0.03	0.003	0.2	0.009
Subsurface Soil COPECs							
PCB 1260 (Max)	--	0.08	--	0.05	--	--	0.03
Copper							
Low TRV	--	0.51	--	0.05	--	--	0.03
High TRV	--	0.02	--	0.0002	--	--	0.0001
Selenium							
Low TRV	--	0.15	--	0.08	--	--	0.05
High TRV	--	0.04	--	0.003	--	--	0.002
Uranium (Max)	--	0.34	--	2.22	--	--	0.53
Uranium (Mean)	--	0.03	--	0.18	--	--	0.04

Table 4.2-13. Summary of new ecological hazards in Site 300 operable units (OUs) 2 through 8.

Media of Concern	Exposure Pathway	Receptors	Contaminant	Five-Year Review Results		Current Status
				HQ/TQ	Comments	
Building 850 (OU 5)						
Sandpile	Absorbed radiation	Ground squirrel Kit fox Burrowing owl	Thorium-228[a]	>1	New constituent detected post-SWFS.	Sandpile removal action currently underway.
Pit 7 Complex (OU 5)						
Pit waste	Ingestion	Ground squirrel Kit fox Burrowing owl	Uranium Uranium-234 Uranium-235 Uranium-238	>1	New constituent detected post-SWFS; maximum activity >background.	Landfill inspected and maintained to prevent exposure of burrowing animals to pit waste.

Notes:

HQ = Hazard quotient.

OU = Operable unit.

TQ = Toxicity quotient.

[a] Thorium-228 does not bioaccumulate. Toxicity Reference Values not available. No HQ was calculated.

Appendix A

Results of Influent and Effluent pH Monitoring

Appendix A

Results of Influent and Effluent pH Monitoring

Table A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2008.

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2008.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
GSA OU				
CGSA GWTS	07/09/2008	7	7.5	NR
CGSA GWTS	08/12/2008	NA	7.5	NR
CGSA GWTS	09/09/2008	NA	7.5	NR
CGSA GWTS	10/21/2008	7	7.2	NR
CGSA GWTS	11/05/2008	NA	7.2	NR
CGSA GWTS	12/02/2008	NA	7.2	NR
Building 834 OU				
834 GWTS	07/09/2008	7.91	7.94	NR
834 GWTS	08/04/2008	NA	7.96	NR
834 GWTS	09/02/2008	NA	8.14	NR
834 GWTS	10/08/2008	7.83	7.84	NR
834 GWTS	11/03/2008	NA	7.89	NR
834 GWTS	12/01/2008	NA	7.72	NR
HEPA OU				
815-SRC GWTS	07/08/2008	7.64	7.17	NR
815-SRC GWTS	08/04/2008	NA	7.34	NR
815-SRC GWTS	09/02/2008	NA	7.38	NR
815-SRC GWTS	10/06/2008	7.64	7.17	NR
815-SRC GWTS	11/04/2008	NA	7	NR
815-SRC GWTS	12/08/2008	NA	7	NR
815-PRX GWTS	07/08/2008	7.85	7.42	NR
815-PRX GWTS	08/04/2008	NA	8.03	NR
815-PRX GWTS	09/02/2008	NA	7.76	NR
815-PRX GWTS	10/06/2008	7.83	7.14	NR
815-PRX GWTS	11/03/2008	NA	7	NR
815-PRX GWTS	12/08/2008	NA	6.5	NR
815-DSB GWTS	07/09/2008	7	7	NR
815-DSB GWTS	08/12/2008	NA	7	NR

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2008.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
815-DSB GWTS	09/09/2008	NA	7.3	NR
815-DSB GWTS	10/06/2008	7	7	NR
815-DSB GWTS	11/05/2008	NA	7	NR
815-DSB GWTS	12/02/2008	NA	7	NR
817-SRC GWTS	07/08/2008	7	7	NR
817-SRC GWTS	08/04/2008	NA	7	NR
817-SRC GWTS	09/03/2008	NA	7	NR
817-SRC GWTS	10/13/2008	7	7	NR
817-SRC GWTS	11/04/2008	NA	7	NR
817-SRC GWTS	12/08/2008	NA	7.52	NR
817-PRX GWTS	07/08/2008	7.76	7.18	NR
817-PRX GWTS	08/04/2008	NA	7.46	NR
817-PRX GWTS	09/02/2008	NA	7.4	NR
817-PRX GWTS	09/25/2008	7.77	7.44	NR
817-PRX GWTS	11/04/2008	NA	7	NR
817-PRX GWTS	12/08/2008	NA	7.16	NR
829-SRC GWTS	07/08/2008	7	7	NR
829-SRC GWTS	08/20/2008	NA	7	NR
829-SRC GWTS	09/30/2008	NA	NA	NR
829-SRC GWTS	10/31/2008	NM	NA	NR
829-SRC GWTS	11/30/2008	NA	NA	NR
829-SRC GWTS	12/31/2008	NA	NA	NR
Building 854 OU				
854-SRC GWTS	07/09/2008	7	7	NR
854-SRC GWTS	08/04/2008	NA	7	NR
854-SRC GWTS	09/03/2008	NA	7	NR
854-SRC GWTS	10/06/2008	7	7	NR
854-SRC GWTS	11/04/2008	NA	7	NR
854-SRC GWTS	12/02/2008	NA	7	NR

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2008.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
854-PRX GWTS	**07/31/2008**	**NM**	**NA**	**NR**
854-PRX GWTS	**08/18/2008**	**NA**	**7**	**NR**
854-PRX GWTS	**09/03/2008**	**NA**	**7**	**NR**
854-PRX GWTS	**10/06/2008**	**7**	**7**	**NR**
854-PRX GWTS	**11/12/2008**	**NA**	**7**	**NR**
854-PRX GWTS	**12/02/2008**	**NA**	**7**	**NR**
854-DIS GWTS	**07/10/2008**	**7**	**7**	**NR**
854-DIS GWTS	**08/04/2008**	**NA**	**7**	**NR**
854-DIS GWTS	**09/03/2008**	**NA**	**7**	**NR**
854-DIS GWTS	**10/07/2008**	**7**	**7**	**NR**
854-DIS GWTS	**11/04/2008**	**NA**	**7**	**NR**
854-DIS GWTS	**12/09/2008**	**NA**	**7**	**NR**
832 Canyon OU				
832-SRC GWTS	**07/08/2008**	**7.35**	**7.59**	**NR**
832-SRC GWTS	**08/04/2008**	**NA**	**7.4**	**NR**
832-SRC GWTS	**09/02/2008**	**NA**	**7.58**	**NR**
832-SRC GWTS	**10/08/2008**	**7.86**	**7.46**	**NR**
832-SRC GWTS	**11/03/2008**	**NA**	**7.65**	**NR**
832-SRC GWTS	**12/01/2008**	**NA**	**7.41**	**NR**
830-SRC GWTS	**07/08/2008**	**8.02**	**7.15**	**NR**
830-SRC GWTS	**08/04/2008**	**NA**	**7.55**	**NR**
830-SRC GWTS	**09/02/2008**	**NA**	**7.43**	**NR**
830-SRC GWTS	**10/08/2008**	**7.71**	**7.04**	**NR**
830-SRC GWTS	**11/03/2008**	**NA**	**7.38**	**NR**
830-SRC GWTS	**12/01/2008**	**NA**	**7.33**	**NR**
830-DISS GWTS	**07/09/2008**	**7**	**7**	**NR**
830-DISS GWTS	**08/12/2008**	**NA**	**7**	**NR**
830-DISS GWTS	**09/09/2008**	**NA**	**7.2**	**NR**
830-DISS GWTS	**10/06/2008**	**7**	**7**	**NR**

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2008.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
830-DISS GWTS	11/05/2008	NA	7	NR
830-DISS GWTS	12/02/2008	NA	7	NR

Notes:

834 = Building 834.
815 = Building 815.
817 = Building 817.
829 = Building 829.
854 = Building 854.
832 = Building 832.
830 = Building 830.
CGSA = Central General Services Area.
EGSA = Eastern General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
GWTS = Ground water treatment system.
PRX = Proximal.
PRXN = Proximal North.
SRC = Source.
NA = Not applicable.
NM = Not measured due to facility not operating during this period.
NR = Not required.
OU = Operable unit.
pH = A measure of the acidity or alkalinity of an aqueous solution.
mg/L = milligrams per liter

Appendix B

Analytical Results for Routine Monitoring During 2008

Appendix B

Analytical Results for Routine Monitoring During 2008

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CDF1	1/8/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5 J	<0.5
CDF1	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	01/08/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CDF1	01/08/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	2/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	02/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	3/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	03/11/08 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	4/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	04/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	5/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	05/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	7/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	07/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	08/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	9/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	09/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	10/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	10/07/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	11/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	12/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	12/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	1/8/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5 J	<0.5
CON1	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	01/08/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CON1	01/08/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	2/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	02/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	3/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	03/11/08 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	4/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	04/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	5/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	05/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	7/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	07/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	08/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	9/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	09/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	10/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	10/07/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	11/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	12/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	12/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5 J	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE	trans-1,2-	Carbon	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	1,1,1-TCA	1,1,2-TCA	Freon 11	Freon 113	Vinyl chloride
CON2	2/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	3/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	4/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	5/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	7/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	07/14/08 DUP	E601	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<1 LO	<2 LO	<0.5 LO
CON2	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	08/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
CON2	9/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	09/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
CON2	10/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON2	12/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-24P-03	6/16/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25D-01	6/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25D-02	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25M-01	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25M-02	6/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25M-03	6/10/08	E601	0.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-01	2/5/08	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-01	5/28/08	E601	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-01	12/11/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-04	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-05	3/19/08	E601	0.97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-05	6/10/08	E601	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-06	6/10/08	E601	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-07	2/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-07	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-07	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-07	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-08	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-09	5/28/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-10	2/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-10	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-10	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-10	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-11	2/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-11	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-11	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-11	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-12	2/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-12	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-12	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-12	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-13	2/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-13	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-13	8/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-13	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-15	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-18	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-20	4/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-21	5/28/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-22	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-23	3/19/08	E601	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE	trans-1,2-	Carbon	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	1,1,1-TCA	1,1,2-TCA	Freon 11	Freon 113	Vinyl chloride
W-25N-23	6/2/08	E601	0.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-23	06/02/08 DUP	E601	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-23	11/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-24	2/5/08	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-24	5/28/08	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-24	12/11/08	E601	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-25	5/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-26	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-28	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	2/4/08	E601	4	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	02/04/08 DUP	E601	4.1	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	4/7/08	E601	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	04/07/08 DUP	E601	3.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	10/20/08	E601	3.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-01	10/20/08 DUP	E601	3.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-02	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-03	2/5/08	E601	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-03	5/28/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-03	11/19/08	E601	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-04	2/5/08	E601	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-04	6/2/08	E601	3.8	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-04	12/11/08	E601	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-05	2/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-05	02/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-05	4/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-05	10/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-06	2/4/08	E601	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-06	6/2/08	E601	3.5	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-06	12/11/08	E601	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-07	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-08	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-11	4/7/08	E601	0.96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-01	5/29/08	E601	9.6	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-01	12/16/08	E601	2.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-02	6/16/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-02	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-03	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-03	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	4/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	10/22/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	10/22/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	10/22/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	10/22/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-05	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-05	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-06	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-06	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-07	6/16/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-07	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-08	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-08	6/16/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-08	9/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-08	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-09	6/16/08	E601	0.54 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5
W-35A-09	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE	trans-1,2-	Carbon	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	1,1,1-TCA	1,1,2-TCA	Freon 11	Freon 113	Vinyl chloride
W-35A-10	6/16/08	E601	21 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.3	<0.5	<0.5
W-35A-10	12/15/08	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5	<0.5
W-35A-10	12/15/08 DUP	E601	7.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	<0.5
W-35A-11	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-11	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-12	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-12	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-13	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-13	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-13	12/16/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-14	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-14	6/16/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-14	9/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-14	12/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7A	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7A	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	12/16/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7C	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7C	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7D	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7DS	4/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	4/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	10/21/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	4/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	04/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	10/21/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7F	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7F	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	2/12/08	E601	270 D	19	29	1.4	<0.5	<0.5	0.54	<0.5	3.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	4/9/08	E601	67	9.7	20	1.6	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
W-7J	5/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7J	12/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7L	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7L	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7M	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7M	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7N	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7N	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	2/12/08	E601	110 D	8.3	1	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	4/9/08	E601	77	5.2	0.65	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	10/21/08	E601	73	5.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.95	<0.5	<0.5	0.5	<0.5	<0.5
W-7P	2/27/08	E601	10	0.69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7P	4/9/08	E601	11	0.85	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7PS	3/13/08	E601	4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7PS	9/15/08	E601	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7PS	10/21/08	E601	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	3/12/08	E601	72	5.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE	trans-1,2-	Carbon	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	1,1,1-TCA	1,1,2-TCA	Freon 11	Freon 113	Vinyl chloride
W-7Q	03/12/08 DUP	E601	69 D	4.6 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5 D	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	5/19/08	E601	34	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	9/11/08	E601	43	4.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	09/11/08 DUP	E601	39	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	12/2/08	E601	36	4.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7R	2/12/08	E601	11	0.85	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7R	4/9/08	E601	6.8	0.63	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7R	10/21/08	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	3/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	5/27/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	9/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	3/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	03/13/08 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	5/27/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	9/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	12/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-843-01	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-843-01	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-843-02	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-843-02	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-872-01	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-872-01	06/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-872-01	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-01	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-01	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-02	6/5/08	E601	8.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.8	<0.5	<0.5
W-873-03	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-03	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-04	6/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-04	12/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-06	6/5/08	E601	5.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56	<0.5	<0.5
W-873-06	06/05/08 DUP	E601	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
W-873-06	12/15/08	E601	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-07	4/9/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.6	<0.5	<0.5
W-873-07	10/21/08	E601	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5	<0.5
W-CGSA-1733	3/13/08	E601	8.8	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1733	5/27/08	E601	9.3	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1733	9/15/08	E601	12	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1733	12/17/08	E601	12	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1735	5/27/08	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1736	5/27/08	E601	5.2	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1736	12/15/08	E601	4.9	0.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1737	5/27/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1737	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1739	3/13/08	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1739	5/27/08	E601	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1739	9/15/08	E601	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1739	12/17/08	E601	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	6/4/08	E601	3	<0.5	6.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	06/04/08 DUP	E601	5.5	<0.5	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	12/16/08	E601	7.5	<0.5	2.6	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-02	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-02	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-04	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE	trans-1,2-	Carbon	Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	1,1,1-TCA	1,1,2-TCA	Freon 11	Freon 113	Vinyl chloride
W-875-04	12/16/08	E601	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-05	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-05	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-06	6/4/08	E601	1.3	<0.5	0.76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-06	12/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-07	2/12/08	E601	380 D	14	25	1.3	<0.5	<0.5	<0.5	0.62	3.9	<0.5	0.65	<0.5	<0.5	<0.5
W-875-07	4/9/08	E601	960 D	110 D	30	<0.5	<0.5	<0.5	<0.5	1.1	8.7	<0.5	1	<0.5	<0.5	<0.5
W-875-07	10/21/08	E601	300 D	30	10	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	0.52	<0.5	<0.5	<0.5
W-875-08	2/12/08	E601	240 D	1.6	23	2.4	<0.5	<0.5	<0.5	<0.5	4.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	4/9/08	E601	300 D	3.8	22	2	<0.5	<0.5	<0.5	<0.5	5.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	10/21/08	E601	350 D	0.77	24	2.1	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	6/4/08	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	06/04/08 DUP	E601	3.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	12/8/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	12/08/08 DUP	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-879-01	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-879-01	12/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-889-01	6/3/08	E601	37	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-889-01	12/11/08	E601	27	<0.5	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
CDF1	1/8/08	E502.2	0 of 46	-
CDF1	1/8/08	E601	0 of 18	-
CDF1	01/08/08 DUP	E502.2	0 of 45	-
CDF1	01/08/08 DUP	E601	0 of 18	-
CDF1	2/14/08	E601	0 of 18	-
CDF1	02/14/08 DUP	E601	0 of 18	-
CDF1	3/11/08	E601	0 of 18	-
CDF1	03/11/08 DUP	E601	0 of 18	-
CDF1	4/10/08	E601	0 of 18	-
CDF1	04/10/08 DUP	E601	0 of 18	-
CDF1	5/13/08	E601	0 of 18	-
CDF1	05/13/08 DUP	E601	0 of 18	-
CDF1	6/12/08	E601	0 of 18	-
CDF1	6/12/08	E601	0 of 18	-
CDF1	7/14/08	E601	0 of 18	-
CDF1	07/14/08 DUP	E601	0 of 18	-
CDF1	8/12/08	E601	0 of 18	-
CDF1	08/12/08 DUP	E601	0 of 18	-
CDF1	9/11/08	E601	0 of 18	-
CDF1	09/11/08 DUP	E601	0 of 18	-
CDF1	10/7/08	E601	0 of 18	-
CDF1	10/07/08 DUP	E601	0 of 18	-
CDF1	11/11/08	E601	0 of 18	-
CDF1	11/11/08 DUP	E601	0 of 18	-
CDF1	12/10/08	E601	0 of 18	-
CDF1	12/10/08 DUP	E601	0 of 18	-
CON1	1/8/08	E502.2	0 of 46	-
CON1	1/8/08	E601	0 of 18	-
CON1	01/08/08 DUP	E502.2	0 of 45	-
CON1	01/08/08 DUP	E601	0 of 18	-
CON1	2/14/08	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
CON1	02/14/08 DUP	E601	0 of 18	-
CON1	3/11/08	E601	0 of 18	-
CON1	03/11/08 DUP	E601	0 of 18	-
CON1	4/10/08	E601	0 of 18	-
CON1	04/10/08 DUP	E601	0 of 18	-
CON1	5/13/08	E601	0 of 18	-
CON1	05/13/08 DUP	E601	0 of 18	-
CON1	6/12/08	E601	0 of 18	-
CON1	6/12/08	E601	0 of 18	-
CON1	7/14/08	E601	0 of 18	-
CON1	07/14/08 DUP	E601	0 of 18	-
CON1	8/12/08	E601	0 of 18	-
CON1	08/12/08 DUP	E601	0 of 18	-
CON1	9/11/08	E601	0 of 18	-
CON1	09/11/08 DUP	E601	0 of 18	-
CON1	10/7/08	E601	0 of 18	-
CON1	10/07/08 DUP	E601	0 of 18	-
CON1	11/11/08	E601	0 of 18	-
CON1	11/11/08 DUP	E601	0 of 18	-
CON1	12/10/08	E601	0 of 18	-
CON1	12/10/08 DUP	E601	0 of 18	-
CON2	1/8/08	E601	0 of 18	-
CON2	2/14/08	E601	0 of 18	-
CON2	3/11/08	E601	0 of 18	-
CON2	4/9/08	E601	0 of 18	-
CON2	5/13/08	E601	0 of 18	-
CON2	6/12/08	E601	0 of 18	-
CON2	7/14/08	E601	0 of 18	-
CON2	07/14/08 DUP	E601	0 of 18	-
CON2	8/12/08	E601	0 of 18	-
CON2	08/12/08 DUP	E601	0 of 18	-
CON2	9/11/08	E601	0 of 18	-
CON2	09/11/08 DUP	E601	0 of 18	-
CON2	10/7/08	E601	0 of 18	-
CON2	11/11/08	E601	0 of 18	-
CON2	12/10/08	E601	0 of 18	-
W-24P-03	6/16/08	E601	0 of 18	-
W-25D-01	6/17/08	E601	0 of 18	-
W-25D-02	6/10/08	E601	0 of 18	-
W-25M-01	6/10/08	E601	0 of 18	-
W-25M-02	6/24/08	E601	0 of 18	-
W-25M-03	6/10/08	E601	0 of 18	-
W-25N-01	2/5/08	E601	0 of 18	-
W-25N-01	5/28/08	E601	0 of 18	-
W-25N-01	12/11/08	E601	0 of 18	-
W-25N-04	5/29/08	E601	0 of 18	-
W-25N-05	3/19/08	E601	0 of 18	-
W-25N-05	6/10/08	E601	0 of 18	-
W-25N-06	6/10/08	E601	0 of 18	-
W-25N-07	2/6/08	E601	0 of 18	-
W-25N-07	5/19/08	E601	0 of 18	-
W-25N-07	8/12/08	E601	0 of 18	-
W-25N-07	12/2/08	E601	0 of 18	-
W-25N-08	5/29/08	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-25N-09	5/28/08	E601	0 of 18	-
W-25N-10	2/6/08	E601	0 of 18	-
W-25N-10	5/19/08	E601	0 of 18	-
W-25N-10	8/12/08	E601	0 of 18	-
W-25N-10	12/2/08	E601	0 of 18	-
W-25N-11	2/6/08	E601	0 of 18	-
W-25N-11	5/19/08	E601	0 of 18	-
W-25N-11	8/12/08	E601	0 of 18	-
W-25N-11	12/2/08	E601	0 of 18	-
W-25N-12	2/6/08	E601	0 of 18	-
W-25N-12	5/19/08	E601	0 of 18	-
W-25N-12	8/12/08	E601	0 of 18	-
W-25N-12	12/2/08	E601	0 of 18	-
W-25N-13	2/6/08	E601	0 of 18	-
W-25N-13	5/19/08	E601	0 of 18	-
W-25N-13	8/12/08	E601	0 of 18	-
W-25N-13	12/2/08	E601	0 of 18	-
W-25N-15	6/10/08	E601	0 of 18	-
W-25N-18	6/10/08	E601	0 of 18	-
W-25N-20	4/7/08	E601	0 of 18	-
W-25N-21	5/28/08	E601	0 of 18	-
W-25N-22	5/29/08	E601	0 of 18	-
W-25N-23	3/19/08	E601	0 of 18	-
W-25N-23	6/2/08	E601	0 of 18	-
W-25N-23	06/02/08 DUP	E601	0 of 18	-
W-25N-23	11/18/08	E601	0 of 18	-
W-25N-24	2/5/08	E601	0 of 18	-
W-25N-24	5/28/08	E601	0 of 18	-
W-25N-24	12/11/08	E601	0 of 18	-
W-25N-25	5/13/08	E601	0 of 18	-
W-25N-26	6/10/08	E601	0 of 18	-
W-25N-28	6/10/08	E601	0 of 18	-
W-26R-01	2/4/08	E601	0 of 18	-
W-26R-01	02/04/08 DUP	E601	0 of 18	-
W-26R-01	4/7/08	E601	0 of 18	-
W-26R-01	04/07/08 DUP	E601	0 of 18	-
W-26R-01	10/20/08	E601	0 of 18	-
W-26R-01	10/20/08 DUP	E601	0 of 18	-
W-26R-02	6/2/08	E601	0 of 18	-
W-26R-03	2/5/08	E601	0 of 18	-
W-26R-03	5/28/08	E601	0 of 18	-
W-26R-03	11/19/08	E601	0 of 18	-
W-26R-04	2/5/08	E601	0 of 18	-
W-26R-04	6/2/08	E601	0 of 18	-
W-26R-04	12/11/08	E601	0 of 18	-
W-26R-05	2/4/08	E601	0 of 18	-
W-26R-05	02/04/08 DUP	E601	0 of 18	-
W-26R-05	4/7/08	E601	0 of 18	-
W-26R-05	10/20/08	E601	0 of 18	-
W-26R-06	2/4/08	E601	0 of 18	-
W-26R-06	6/2/08	E601	0 of 18	-
W-26R-06	12/11/08	E601	0 of 18	-
W-26R-07	6/5/08	E601	0 of 18	-
W-26R-08	6/2/08	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-26R-11	4/7/08	E601	0 of 18	-
W-35A-01	5/29/08	E601	0 of 18	-
W-35A-01	12/16/08	E601	0 of 18	-
W-35A-02	6/16/08	E601	0 of 18	-
W-35A-02	12/15/08	E601	0 of 18	-
W-35A-03	5/29/08	E601	0 of 18	-
W-35A-03	12/16/08	E601	0 of 18	-
W-35A-04	4/15/08	E601	0 of 18	-
W-35A-04	10/22/08	E502.2	0 of 46	-
W-35A-04	10/22/08	E601	0 of 18	-
W-35A-04	10/22/08 DUP	E502.2	0 of 46	-
W-35A-04	10/22/08 DUP	E601	0 of 18	-
W-35A-05	5/29/08	E601	0 of 18	-
W-35A-05	12/16/08	E601	0 of 18	-
W-35A-06	5/29/08	E601	0 of 18	-
W-35A-06	12/16/08	E601	0 of 18	-
W-35A-07	6/16/08	E601	0 of 18	-
W-35A-07	12/15/08	E601	0 of 18	-
W-35A-08	3/20/08	E601	0 of 18	-
W-35A-08	6/16/08	E601	0 of 18	-
W-35A-08	9/17/08	E601	0 of 18	-
W-35A-08	12/15/08	E601	0 of 18	-
W-35A-09	6/16/08	E601	0 of 18	-
W-35A-09	12/15/08	E601	0 of 18	-
W-35A-10	6/16/08	E601	0 of 18	-
W-35A-10	12/15/08	E601	0 of 18	-
W-35A-10	12/15/08 DUP	E601	0 of 18	-
W-35A-11	5/29/08	E601	0 of 18	-
W-35A-11	12/16/08	E601	0 of 18	-
W-35A-12	5/29/08	E601	0 of 18	-
W-35A-12	12/16/08	E601	0 of 18	-
W-35A-13	5/29/08	E601	0 of 18	-
W-35A-13	12/16/08	E601	0 of 18	-
W-35A-13	12/16/08 DUP	E601	0 of 18	-
W-35A-14	3/20/08	E601	0 of 18	-
W-35A-14	6/16/08	E601	0 of 18	-
W-35A-14	9/17/08	E601	0 of 18	-
W-35A-14	12/17/08	E601	0 of 18	-
W-7A	6/3/08	E601	0 of 18	-
W-7A	12/3/08	E601	0 of 18	-
W-7B	6/3/08	E601	0 of 18	-
W-7B	12/16/08	E601	0 of 18	-
W-7B	12/16/08 DUP	E601	0 of 18	-
W-7C	6/3/08	E601	0 of 18	-
W-7C	12/3/08	E601	0 of 18	-
W-7D	6/2/08	E601	0 of 18	-
W-7DS	4/14/08	E601	0 of 18	-
W-7E	4/14/08	E601	0 of 18	-
W-7E	10/21/08	E601	0 of 18	-
W-7ES	4/14/08	E601	0 of 18	-
W-7ES	04/14/08 DUP	E601	0 of 18	-
W-7ES	10/21/08	E601	0 of 18	-
W-7F	5/19/08	E601	0 of 18	-
W-7F	12/2/08	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-7G	6/3/08	E601	0 of 18	-
W-7G	12/3/08	E601	0 of 18	-
W-7H	6/3/08	E601	0 of 18	-
W-7H	12/3/08	E601	0 of 18	-
W-7I	2/12/08	E601	1 of 18	31
W-7I	4/9/08	E601	1 of 18	22
W-7J	5/19/08	E601	0 of 18	-
W-7J	12/2/08	E601	0 of 18	-
W-7K	6/3/08	E601	0 of 18	-
W-7K	12/3/08	E601	0 of 18	-
W-7L	6/3/08	E601	0 of 18	-
W-7L	12/3/08	E601	0 of 18	-
W-7M	6/3/08	E601	0 of 18	-
W-7M	12/3/08	E601	0 of 18	-
W-7N	6/3/08	E601	0 of 18	-
W-7N	12/3/08	E601	0 of 18	-
W-7O	2/12/08	E601	1 of 18	1
W-7O	4/9/08	E601	0 of 18	-
W-7O	10/21/08	E601	0 of 18	-
W-7P	2/27/08	E601	0 of 18	-
W-7P	4/9/08	E601	0 of 18	-
W-7PS	3/13/08	E601	0 of 18	-
W-7PS	9/15/08	E601	0 of 18	-
W-7PS	10/21/08	E601	0 of 18	-
W-7Q	3/12/08	E601	0 of 18	-
W-7Q	03/12/08 DUP	E601	0 of 18	-
W-7Q	5/19/08	E601	0 of 18	-
W-7Q	9/11/08	E601	0 of 18	-
W-7Q	09/11/08 DUP	E601	0 of 18	-
W-7Q	12/2/08	E601	0 of 18	-
W-7R	2/12/08	E601	0 of 18	-
W-7R	4/9/08	E601	0 of 18	-
W-7R	10/21/08	E601	0 of 18	-
W-7S	3/13/08	E601	0 of 18	-
W-7S	5/27/08	E601	0 of 18	-
W-7S	9/11/08	E601	0 of 18	-
W-7S	12/3/08	E601	0 of 18	-
W-7T	3/13/08	E601	0 of 18	-
W-7T	03/13/08 DUP	E601	0 of 18	-
W-7T	5/27/08	E601	0 of 18	-
W-7T	9/11/08	E601	0 of 18	-
W-7T	12/3/08	E601	0 of 18	-
W-843-01	6/5/08	E601	0 of 18	-
W-843-01	12/11/08	E601	0 of 18	-
W-843-02	6/5/08	E601	0 of 18	-
W-843-02	12/11/08	E601	0 of 18	-
W-872-01	6/4/08	E601	0 of 18	-
W-872-01	06/04/08 DUP	E601	0 of 18	-
W-872-01	12/15/08	E601	0 of 18	-
W-873-01	6/5/08	E601	0 of 18	-
W-873-01	12/11/08	E601	0 of 18	-
W-873-02	6/5/08	E601	0 of 18	-
W-873-03	6/5/08	E601	0 of 18	-
W-873-03	12/11/08	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-873-04	6/5/08	E601	0 of 18	-
W-873-04	12/15/08	E601	0 of 18	-
W-873-06	6/5/08	E601	0 of 18	-
W-873-06	06/05/08 DUP	E601	0 of 18	-
W-873-06	12/15/08	E601	0 of 18	-
W-873-07	4/9/08	E601	0 of 18	-
W-873-07	10/21/08	E601	0 of 18	-
W-CGSA-1733	3/13/08	E601	0 of 18	-
W-CGSA-1733	5/27/08	E601	0 of 18	-
W-CGSA-1733	9/15/08	E601	0 of 18	-
W-CGSA-1733	12/17/08	E601	0 of 18	-
W-CGSA-1735	5/27/08	E601	0 of 18	-
W-CGSA-1736	5/27/08	E601	0 of 18	-
W-CGSA-1736	12/15/08	E601	0 of 18	-
W-CGSA-1737	5/27/08	E601	0 of 18	-
W-CGSA-1737	12/11/08	E601	0 of 18	-
W-CGSA-1739	3/13/08	E601	0 of 18	-
W-CGSA-1739	5/27/08	E601	0 of 18	-
W-CGSA-1739	9/15/08	E601	0 of 18	-
W-CGSA-1739	12/17/08	E601	0 of 18	-
W-875-01	6/4/08	E601	1 of 18	7.2
W-875-01	06/04/08 DUP	E601	1 of 18	5.6
W-875-01	12/16/08	E601	1 of 18	4.3
W-875-02	6/4/08	E601	0 of 18	-
W-875-02	12/16/08	E601	0 of 18	-
W-875-04	6/4/08	E601	0 of 18	-
W-875-04	12/16/08	E601	0 of 18	-
W-875-05	6/4/08	E601	0 of 18	-
W-875-05	12/8/08	E601	0 of 18	-
W-875-06	6/4/08	E601	0 of 18	-
W-875-06	12/16/08	E601	0 of 18	-
W-875-07	2/12/08	E601	1 of 18	26
W-875-07	4/9/08	E601	1 of 18	30
W-875-07	10/21/08	E601	1 of 18	10
W-875-08	2/12/08	E601	1 of 18	25
W-875-08	4/9/08	E601	1 of 18	24
W-875-08	10/21/08	E601	1 of 18	26
W-876-01	6/4/08	E601	0 of 18	-
W-876-01	06/04/08 DUP	E601	0 of 18	-
W-876-01	12/8/08	E601	0 of 18	-
W-876-01	12/08/08 DUP	E601	0 of 18	-
W-879-01	6/4/08	E601	0 of 18	-
W-879-01	12/11/08	E601	0 of 18	-
W-889-01	6/3/08	E601	1 of 18	1.2
W-889-01	12/11/08	E601	0 of 18	-

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-1709	1/24/08	E601	21,000 D	60 D	850 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-1709	8/13/08	E601	4,600 D	21 D	330 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-1711	1/23/08	E601	780 D	1.3 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D
W-834-1711	8/13/08	E601	890 D	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-1824	1/23/08	E601	0.52	<0.5	<0.5	<0.5	<0.5	0.62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-1824	9/23/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-1825	1/23/08	E601	3,200 D	5.2 D	530 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-1825	6/16/08	E601	1,800 D	<5 D	1,200 D	<50 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-1825	9/23/08	E601	0.69	<0.5	220 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	71
W-834-1825	11/11/08	E601	3.8 D	<2.5 D	310 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	70 D
W-834-1825	12/23/08	E601	7.2	<0.5	150 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	100 D
W-834-1833	1/23/08	E601	8,400 D	16 D	450 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-834-1833	6/16/08	E601	8,300 D	<25 D	370 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-1833	9/23/08	E601	10,000 D	18 D	400 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-1833	11/11/08	E601	7,000 D	21	370 D	<2.5 D	0.99	3.2	<0.5	<0.5	3.1	<0.5	2.2	0.89	<0.5	<0.5
W-834-1833	11/11/08 DUP	E601	8,300 D	<50 D	350 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-1833	12/23/08	E601	11,000 D	<25 D	360 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-2001	1/23/08	E624	2,000 D	32 D	1,400 D	<50 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-2001	4/3/08	E624	1,400 D	12 D	230 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-2001	7/23/08	E624	7,900 D	67 D	1,800 D	<200 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-2001	10/14/08	E624	1,300 D	21 D	400 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-2113	1/24/08	E624	49,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,000 D	<500 D
W-834-2113	6/10/08	E624	12,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,000 D	<500 D
W-834-2113	06/10/08 DUP	E624	17,000 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-2113	8/26/08	E624	9,600 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<500 DFH	<1,000 DFH	<500 DFH
W-834-2117	1/30/08	E624	14,000 D	110 D	78 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-2117	6/10/08	E624	12,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,000 D	<500 D
W-834-2117	06/10/08 DUP	E624	12,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<1,000 D	<500 D
W-834-2117	8/13/08	E624	13,000 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<500 DH	<250 DH
W-834-2118	2/26/08	E624	180 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
W-834-2118	6/11/08	E624	230 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<5 DH	<10 DH	<5 DH
W-834-2118	8/14/08	E624	520 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<10 D	<5 D
W-834-2119	1/30/08	E624	12,000 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-2119	8/13/08	E624	13,000 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<250 DH	<500 DH	<250 DH
W-834-A1	2/13/08	E624	180,000 D	960 D	9,700 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D
W-834-A1	8/18/08	E624	190,000 D	940 D	530 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D
W-834-A2	2/13/08	E601	3,200 D	8.5 D	1,700 D	<50 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B2	1/23/08	E601	520 D	11	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-B2	4/3/08	E601	3,000 D	68 D	1,100 D	<25 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B2	7/23/08	E601	2,200 D	19 D	450 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B2	10/14/08	E601	1,800 D	16 D	490 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B3	1/23/08	E601	85	<0.5	360 D	<25 D	<0.5	<0.5	<0.5	<0.5	0.87	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-B3	4/3/08	E601	430 D	<2.5 D	1,800 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	6.2 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-834-B3	7/23/08	E601	720 D	<5 D	3,500 D	<25 D	<5 D	<5 D	<5 D	<5 D	9.6 D	<5 D	<5 D	<5 D	<5 D	5 D
W-834-B3	10/14/08	E601	710 D	<5 D	3,000 D	<50 D	<5 D	<5 D	<5 D	<5 D	9.1 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B4	2/7/08	E601	3,400 D	8.8 D	2,500 D	<25 D	<5 D	<5 D	<5 D	<5 D	5.8 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B4	8/18/08	E601	1,700 D	5.1 D	3,700 D	<25 D	<5 D	<5 D	<5 D	<5 D	12 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-C2	3/10/08	E601	950 D	5.6	68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-C4	2/7/08	E601	12	<0.5	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-C4	8/18/08	E601	140 D	<0.5	190 D	<2.5 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-C5	2/7/08	E601	13,000 D	36 D	2,400 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-C5	8/18/08	E601	40,000 D	120 D	26,000 D	<250 D	<50 D	<50 D	<50 D	<50 D	81 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-D3	2/13/08	E601	<10 D	<10 D	3,900 D	<50 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	97 D
W-834-D3	8/19/08	E601	<5 D	<5 D	3,300 D	<25 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	150 D
W-834-D3	08/19/08 DUP	E601	<5 D	<5 D	3,200 D	<25 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	150 D
W-834-D4	1/23/08	E601	15,000 D	49 D	6,800 D	<500 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D4	4/3/08	E601	21,000 D	86 D	2,400 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D4	7/23/08	E601	18,000 D	92 D	4,400 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D4	10/14/08	E601	17,000 D	92 D	7,800 D	<250 D	<25 D	54 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D5	2/4/08	E601	2,100 D	<10 D	4,200 D	90 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	100 D
W-834-D5	7/23/08	E601	520 D	0.9	330 D	<25 D	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5	5.1
W-834-D6	1/23/08	E601	340 D	2.1	130 D	<2.5 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5
W-834-D6	4/3/08	E601	3,300 D	12 D	910 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	7.3 D	<5 D
W-834-D6	7/23/08	E601	3,200 D	8.4 D	760 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-D6	10/14/08	E601	1,300 D	<5 D	460 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-D7	1/23/08	E624	1,500 D	10 D	290 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-D7	4/3/08	E601	4,200 D	17 D	270 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-D7	7/23/08	E624	6,700 D	<50 D	230 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-D7	10/14/08	E601	6,400 D	17 D	130 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-D11	2/25/08	E601	4,700 D	6.7 D	320 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-D11	02/25/08 DUP	E601	4,800 D	10	290 D	1	<0.5	1.2	<0.5	<0.5	2.1	<0.5	1	<0.5	<0.5	<0.5
W-834-D12	1/23/08	E624	240 D	1	98	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-834-D12	4/3/08	E601	410 D	1.5	94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	<0.5	<0.5
W-834-D12	7/23/08	E624	460 D	1.8	43	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-834-D12	10/14/08	E601	350 D	1.7	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D13	1/23/08	E601	16,000 D	130 D	880 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D13	4/3/08	E601	14,000 D	120 D	700 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D13	7/23/08	E601	12,000 D	120 D	560 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D13	10/14/08	E601	12,000 D	120 D	510 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D14	2/6/08	E601	16,000 D	44 D	800 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D14	8/21/08	E601	13,000 D	30 D	860 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D15	2/6/08	E601	9,800 D	<25 D	110 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D15	8/19/08	E601	4,800 D	<10 D	130 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-D18	2/6/08	E601	190 D	<0.5	170 D	<2.5 D	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D18	8/19/08	E601	230 D	0.55	200 D	<5 D	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	1/24/08	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	4/3/08	E601	220 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	7/23/08	E601	170 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	10/14/08	E601	110 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J2	2/25/08	E601	170 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J2	02/25/08 DUP	E601	160 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J2	8/21/08	E601	140 D	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J2	08/21/08 DUP	E601	130 D	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-M1	2/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-M1	8/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S1	1/24/08	E624	840 D	47 D	37 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D
W-834-S1	4/3/08	E624	4,100 D	110 D	200 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D
W-834-S1	7/23/08	E624	4,300 D	130 D	240 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D
W-834-S1	10/14/08	E624	4,100 D	89 D	310 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-S12A	1/24/08	E624	1,100 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S12A	4/3/08	E624	3,000 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S12A	7/23/08	E624	2,500 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S12A	10/14/08	E624	2,100 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S13	1/24/08	E601	210 D	0.91	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
W-834-S13	4/3/08	E601	500 D	1.5	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5
W-834-S13	7/23/08	E601	460 D	1.2	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.57	<0.5	<0.5	<0.5
W-834-S13	10/14/08	E601	350 D	1.1	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56	<0.5	<0.5	<0.5
W-834-S4	2/20/08	E601	6.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S4	7/14/08	E601	9.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S4	07/14/08 DUP	E601	8.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-S6	2/26/08	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S6	8/14/08	E601	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S7	2/26/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S7	8/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S8	3/10/08	E624	1,900 D	29 D	32 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S8	7/14/08	E624	3,700 D	73 D	58 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S8	07/14/08 DUP	E624	4,100 DL	70 D	68 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<100 D	<50 D
W-834-S9	3/10/08	E624	1,300 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S9	03/10/08 DUP	E624	1,700 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<200 D	<100 D
W-834-S9	7/14/08	E624	1,800 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-S9	07/14/08 DUP	E624	1,600 DL	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<40 D	<20 D
W-834-T1	3/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T1	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T1	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T1	11/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T2	2/28/08	E601	6,000 D	10 D	950 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-T2	6/16/08	E601	450 D	<10 D	5,400 D	<250 D	<10 D	<10 D	<10 D	<10 D	11 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-T2	9/23/08	E601	49 D	<10 D	6,200 D	<50 D	<10 D	<10 D	<10 D	<10 D	16 D	<10 D	<10 D	<10 D	<10 D	11 D
W-834-T2	11/11/08	E601	11 D	<2.5 D	1,000 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	2.8 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	350 D
W-834-T2	12/23/08	E601	<0.5	<0.5	10	13	<0.5	<0.5	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5	9.5
W-834-T2A	2/28/08	E601	13,000 D	28 D	40 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T2A	9/23/08	E601	13,000 D	<25 D	99 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T2A	12/23/08	E601	12,000 D	<25 D	120 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T2D	2/28/08	E601	11,000 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T2D	8/26/08	E601	11,000 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T2D	12/23/08	E601	9,000 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-T3	3/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T3	6/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T3	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T3	11/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T5	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T5	8/26/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-T7A	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-U1	2/26/08	E624	45,000 D	280 D	6,700 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D	<200 D
W-834-U1	02/26/08 DUP	E624	44,000 D	70 D	1,500 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-834-U1	8/25/08	E624	7,200 D	49 D	440 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
W-834-1709	1/24/08	E601	1 of 18	850 D	-
W-834-1709	8/13/08	E601	1 of 18	330 D	-
W-834-1711	1/23/08	E601	0 of 18	-	-
W-834-1711	8/13/08	E601	0 of 18	-	-
W-834-1824	1/23/08	E601	0 of 18	-	-
W-834-1824	9/23/08	E601	0 of 18	-	-
W-834-1825	1/23/08	E601	1 of 18	530 D	-
W-834-1825	6/16/08	E601	1 of 18	1,200 D	-
W-834-1825	9/23/08	E601	1 of 18	220 D	-
W-834-1825	11/11/08	E601	1 of 18	320 D	-
W-834-1825	12/23/08	E601	1 of 18	150 D	-
W-834-1833	1/23/08	E601	1 of 18	450 D	-
W-834-1833	6/16/08	E601	1 of 18	370 D	-
W-834-1833	9/23/08	E601	1 of 18	400 D	-
W-834-1833	11/11/08	E601	1 of 18	370 D	-
W-834-1833	11/11/08 DUP	E601	1 of 18	350 D	-
W-834-1833	12/23/08	E601	1 of 18	360 D	-
W-834-2001	1/23/08	E624	1 of 30	1,400 D	-
W-834-2001	4/3/08	E624	1 of 30	230 D	-
W-834-2001	7/23/08	E624	1 of 30	1,800 D	-
W-834-2001	10/14/08	E624	1 of 30	400 D	-
W-834-2113	1/24/08	E624	0 of 30	-	-
W-834-2113	6/10/08	E624	0 of 30	-	-
W-834-2113	06/10/08 DUP	E624	0 of 30	-	-
W-834-2113	8/26/08	E624	0 of 30	-	-
W-834-2117	1/30/08	E624	1 of 30	78 D	-
W-834-2117	6/10/08	E624	0 of 30	-	-
W-834-2117	06/10/08 DUP	E624	0 of 30	-	-
W-834-2117	8/13/08	E624	0 of 30	-	-
W-834-2118	2/26/08	E624	0 of 30	-	-
W-834-2118	6/11/08	E624	0 of 30	-	-
W-834-2118	8/14/08	E624	0 of 30	-	-
W-834-2119	1/30/08	E624	0 of 30	-	-
W-834-2119	8/13/08	E624	0 of 30	-	-
W-834-A1	2/13/08	E624	1 of 30	9,700 D	-
W-834-A1	8/18/08	E624	2 of 30	530 D	7,500
W-834-A2	2/13/08	E601	1 of 18	1,700 D	-
W-834-B2	1/23/08	E601	1 of 18	100	-
W-834-B2	4/3/08	E601	1 of 18	1,100 D	-
W-834-B2	7/23/08	E601	1 of 18	450 D	-
W-834-B2	10/14/08	E601	1 of 18	490 D	-
W-834-B3	1/23/08	E601	1 of 18	360 D	-
W-834-B3	4/3/08	E601	1 of 18	1,800 D	-
W-834-B3	7/23/08	E601	1 of 18	3,500 D	-
W-834-B3	10/14/08	E601	1 of 18	3,000 D	-
W-834-B4	2/7/08	E601	1 of 18	2,500 D	-
W-834-B4	8/18/08	E601	1 of 18	3,700 D	-
W-834-C2	3/10/08	E601	1 of 18	68	-
W-834-C4	2/7/08	E601	1 of 18	13	-
W-834-C4	8/18/08	E601	1 of 18	190 D	-
W-834-C5	2/7/08	E601	1 of 18	2,400 D	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
W-834-C5	8/18/08	E601	1 of 18	26,000 D	-
W-834-D3	2/13/08	E601	1 of 18	3,900 D	-
W-834-D3	8/19/08	E601	1 of 18	3,300 D	-
W-834-D3	08/19/08 DUP	E601	1 of 18	3,200 D	-
W-834-D4	1/23/08	E601	1 of 18	6,800 D	-
W-834-D4	4/3/08	E601	1 of 18	2,400 D	-
W-834-D4	7/23/08	E601	1 of 18	4,400 D	-
W-834-D4	10/14/08	E601	1 of 18	7,800 D	-
W-834-D5	2/4/08	E601	1 of 18	4,200 D	-
W-834-D5	7/23/08	E601	1 of 18	330 D	-
W-834-D6	1/23/08	E601	1 of 18	130 D	-
W-834-D6	4/3/08	E601	1 of 18	910 D	-
W-834-D6	7/23/08	E601	1 of 18	760 D	-
W-834-D6	10/14/08	E601	1 of 18	460 D	-
W-834-D7	1/23/08	E624	1 of 30	290 D	-
W-834-D7	4/3/08	E601	1 of 18	270 D	-
W-834-D7	7/23/08	E624	1 of 30	230 D	-
W-834-D7	10/14/08	E601	1 of 18	130 D	-
W-834-D11	2/25/08	E601	1 of 18	320 D	-
W-834-D11	02/25/08 DUP	E601	0 of 18	-	-
W-834-D12	1/23/08	E624	1 of 30	98	-
W-834-D12	4/3/08	E601	1 of 18	94	-
W-834-D12	7/23/08	E624	1 of 30	43	-
W-834-D12	10/14/08	E601	1 of 18	21	-
W-834-D13	1/23/08	E601	1 of 18	880 D	-
W-834-D13	4/3/08	E601	1 of 18	700 D	-
W-834-D13	7/23/08	E601	1 of 18	560 D	-
W-834-D13	10/14/08	E601	1 of 18	510 D	-
W-834-D14	2/6/08	E601	1 of 18	800 D	-
W-834-D14	8/21/08	E601	1 of 18	860 D	-
W-834-D15	2/6/08	E601	1 of 18	110 D	-
W-834-D15	8/19/08	E601	1 of 18	130 D	-
W-834-D18	2/6/08	E601	1 of 18	170 D	-
W-834-D18	8/19/08	E601	1 of 18	200 D	-
W-834-J1	1/24/08	E601	0 of 18	-	-
W-834-J1	4/3/08	E601	0 of 18	-	-
W-834-J1	7/23/08	E601	0 of 18	-	-
W-834-J1	10/14/08	E601	0 of 18	-	-
W-834-J2	2/25/08	E601	0 of 18	-	-
W-834-J2	02/25/08 DUP	E601	0 of 18	-	-
W-834-J2	8/21/08	E601	0 of 18	-	-
W-834-J2	08/21/08 DUP	E601	0 of 18	-	-
W-834-M1	2/20/08	E601	0 of 18	-	-
W-834-M1	8/20/08	E601	0 of 18	-	-
W-834-S1	1/24/08	E624	2 of 30	37 D	50 D
W-834-S1	4/3/08	E624	1 of 30	200 D	-
W-834-S1	7/23/08	E624	1 of 30	240 D	-
W-834-S1	10/14/08	E624	1 of 30	310 D	-
W-834-S12A	1/24/08	E624	0 of 30	-	-
W-834-S12A	4/3/08	E624	0 of 30	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
W-834-S12A	7/23/08	E624	0 of 30	-	-
W-834-S12A	10/14/08	E624	0 of 30	-	-
W-834-S13	1/24/08	E601	1 of 18	8.3	-
W-834-S13	4/3/08	E601	1 of 18	17	-
W-834-S13	7/23/08	E601	1 of 18	12	-
W-834-S13	10/14/08	E601	1 of 18	10	-
W-834-S4	2/20/08	E601	0 of 18	-	-
W-834-S4	7/14/08	E601	0 of 18	-	-
W-834-S4	07/14/08 DUP	E601	0 of 18	-	-
W-834-S6	2/26/08	E601	0 of 18	-	-
W-834-S6	8/14/08	E601	0 of 18	-	-
W-834-S7	2/26/08	E601	0 of 18	-	-
W-834-S7	8/14/08	E601	0 of 18	-	-
W-834-S8	3/10/08	E624	1 of 30	32 D	-
W-834-S8	7/14/08	E624	1 of 30	58 D	-
W-834-S8	07/14/08 DUP	E624	1 of 30	68 D	-
W-834-S9	3/10/08	E624	0 of 30	-	-
W-834-S9	03/10/08 DUP	E624	0 of 30	-	-
W-834-S9	7/14/08	E624	0 of 30	-	-
W-834-S9	07/14/08 DUP	E624	0 of 30	-	-
W-834-T1	3/11/08	E601	0 of 18	-	-
W-834-T1	6/10/08	E601	0 of 18	-	-
W-834-T1	8/25/08	E601	0 of 18	-	-
W-834-T1	11/18/08	E601	0 of 18	-	-
W-834-T2	2/28/08	E601	1 of 18	950 D	-
W-834-T2	6/16/08	E601	1 of 18	5,400 D	-
W-834-T2	9/23/08	E601	1 of 18	6,200 D	-
W-834-T2	11/11/08	E601	1 of 18	1,000 D	-
W-834-T2	12/23/08	E601	1 of 18	23	-
W-834-T2A	2/28/08	E601	0 of 18	-	-
W-834-T2A	9/23/08	E601	1 of 18	99 D	-
W-834-T2A	12/23/08	E601	1 of 18	120 D	-
W-834-T2D	2/28/08	E601	0 of 18	-	-
W-834-T2D	8/26/08	E601	0 of 18	-	-
W-834-T2D	12/23/08	E601	0 of 18	-	-
W-834-T3	3/11/08	E601	0 of 18	-	-
W-834-T3	6/10/08	E601	0 of 18	-	-
W-834-T3	8/25/08	E601	0 of 18	-	-
W-834-T3	11/18/08	E601	0 of 18	-	-
W-834-T5	3/20/08	E601	0 of 18	-	-
W-834-T5	8/26/08	E601	0 of 18	-	-
W-834-T7A	2/19/08	E601	0 of 18	-	-
W-834-U1	2/26/08	E624	1 of 30	6,700 D	-
W-834-U1	02/26/08 DUP	E624	1 of 30	1,500 D	-
W-834-U1	8/25/08	E624	1 of 30	440 D	-

B-2.2. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-834-1709	1/24/08	16	-
W-834-1709	8/13/08	-	<4
W-834-1711	1/23/08	93 D	-
W-834-1824	1/23/08	<0.5	-
W-834-1825	1/23/08	18	-
W-834-1833	1/23/08	36	-
W-834-2001	1/23/08	<0.5	-
W-834-2001	7/23/08	-	<4
W-834-2113	1/24/08	100 D	-
W-834-2113	11/18/08	86 D	-
W-834-2117	1/30/08	110 D	-
W-834-2118	2/26/08	150 DL	4.6
W-834-2118	8/14/08	-	4
W-834-2119	1/30/08	99 D	-
W-834-A1	2/13/08	<0.5	-
W-834-A2	2/13/08	20	-
W-834-B2	1/23/08	53	-
W-834-B3	1/23/08	13	-
W-834-B4	2/7/08	22	-
W-834-C2	3/10/08	66	-
W-834-C4	2/7/08	53	-
W-834-C5	2/7/08	64	-
W-834-D3	2/13/08	<0.5	-
W-834-D4	1/23/08	8.9	-
W-834-D5	2/4/08	<0.5	-
W-834-D6	1/23/08	32	-
W-834-D7	1/23/08	73	-
W-834-D11	2/25/08	73	-
W-834-D11	02/25/08 DUP	66 D	-
W-834-D12	1/23/08	48	-
W-834-D13	1/23/08	33	-
W-834-D14	2/6/08	21	-
W-834-D15	2/6/08	28	-
W-834-D18	2/6/08	41	-
W-834-J1	1/24/08	120 D	-
W-834-J2	2/25/08	140 D	-
W-834-J2	02/25/08 DUP	150 D	-
W-834-M1	2/20/08	280 D	-
W-834-S1	1/24/08	27	-
W-834-S1	11/17/08	92 D	-
W-834-S12A	1/24/08	98 D	-
W-834-S13	1/24/08	110 D	-
W-834-S4	2/20/08	150 D	-

B-2.2. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-834-S4	11/17/08	150 D	-
W-834-S6	2/26/08	170 D	-
W-834-S7	2/26/08	310 D	10
W-834-S7	8/14/08	-	10
W-834-S8	3/10/08	61	-
W-834-S9	3/10/08	74	-
W-834-S9	03/10/08 DUP	64 D	-
W-834-T1	3/11/08	<0.5	-
W-834-T1	8/25/08	<0.5	-
W-834-T2	2/28/08	4.1	-
W-834-T2A	2/28/08	69	-
W-834-T2D	2/28/08	100 D	-
W-834-T3	3/11/08	<0.5	-
W-834-T3	8/25/08	<0.5	-
W-834-T5	3/20/08	90 D	-
W-834-T7A	2/19/08	36	-
W-834-U1	2/26/08	0.61	-
W-834-U1	02/26/08 DUP	0.5	-

B-2.3. Building 834 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-834-1709	1/24/08	54
W-834-1711	1/23/08	33 D
W-834-1824	1/23/08	<10
W-834-1825	1/23/08	<10 D
W-834-1833	1/23/08	<10 D
W-834-2001	1/23/08	<10 D
W-834-2001	7/23/08	<2,500 DO
W-834-2113	1/24/08	<10
W-834-2113	8/26/08	<10
W-834-2117	1/30/08	<10 DL
W-834-2118	2/26/08	<10
W-834-2119	1/30/08	<10 DL
W-834-A1	2/13/08	<10
W-834-A2	2/13/08	<10
W-834-B2	1/23/08	11
W-834-B3	1/23/08	21
W-834-B4	2/7/08	13
W-834-C2	3/10/08	11
W-834-C4	2/7/08	15
W-834-C5	2/7/08	25
W-834-D3	2/13/08	200 D
W-834-D4	1/23/08	20
W-834-D4	7/23/08	780 DO
W-834-D5	2/4/08	32 L
W-834-D5	7/23/08	25 O
W-834-D6	1/23/08	<10
W-834-D6	7/23/08	<10 O
W-834-D7	1/23/08	14
W-834-D11	3/11/08	34 LO
W-834-D12	1/23/08	<10 D
W-834-D12	7/23/08	71 O
W-834-D13	1/23/08	120
W-834-D13	7/23/08	<10 O
W-834-D14	2/6/08	15
W-834-D15	2/6/08	<10
W-834-D18	2/6/08	<10 D
W-834-J1	1/24/08	<10
W-834-J2	2/25/08	<10
W-834-J2	02/25/08 DUP	<10
W-834-M1	2/20/08	<10
W-834-S1	1/24/08	<10
W-834-S1	7/23/08	<10 O
W-834-S12A	1/24/08	<10
W-834-S13	1/24/08	<10
W-834-S4	2/20/08	<10
W-834-S6	2/26/08	<10
W-834-S7	2/26/08	<10
W-834-S8	3/10/08	<10
W-834-S9	3/10/08	<10
W-834-S9	03/10/08 DUP	<10
W-834-T1	3/11/08	<10
W-834-T1	8/25/08	<10 D
W-834-T2	2/28/08	<10 O
W-834-T2A	2/28/08	<10 O
W-834-T2D	2/28/08	<10 O
W-834-T3	3/11/08	<10
W-834-T3	8/25/08	<10 D
W-834-T5	3/20/08	<10
W-834-T7A	2/19/08	<10
W-834-U1	2/26/08	<10
W-834-U1	02/26/08 DUP	<10

B-2.4. Building 834 Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel (µg/L)	Diesel Range Organics (C12-C24) (µg/L)
W-834-2001	1/23/08	180,000 D	-
W-834-2001	7/23/08	81,000 D	-
W-834-2001	10/14/08	71,000 D	-
W-834-A1	2/13/08	-	<200
W-834-A2	2/13/08	-	210
W-834-D6	1/23/08	-	<200
W-834-D7	1/23/08	-	<200 D
W-834-D12	1/23/08	-	<200 D
W-834-S1	1/24/08	-	<200
W-834-S8	3/10/08	-	<200
W-834-S9	3/10/08	-	<200
W-834-S9	03/10/08 DUP	<50	-
W-834-U1	2/26/08	<200	-
W-834-U1	02/26/08 DUP	<200	-

B-2.5. Building 834 Operable Unit metals and silica in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silica (as SiO2) (mg/L)	Silver (mg/L)
W-834-1711	8/13/08	<0.05	0.044	<0.001	0.011 D	-	<0.005	-	<0.0002	<0.05	-	<0.001
W-834-1825	6/16/08	<0.05	-	-	<0.01	<0.05	-	0.012	-	<0.05	-	-
W-834-1833	6/16/08	<0.05	-	-	<0.01	<0.05	-	0.0039	-	<0.05	-	-
W-834-2001	7/23/08	<0.05	0.063	<0.001	<0.001	-	<0.005	-	<0.0002	<0.05	54	<0.001
W-834-2113	11/18/08	-	-	-	-	-	-	-	-	-	34	-
W-834-2117	11/18/08	-	-	-	-	-	-	-	-	-	27	-
W-834-2118	11/18/08	-	-	-	-	-	-	-	-	-	26	-
W-834-2119	11/18/08	-	-	-	-	-	-	-	-	-	28	-
W-834-M1	2/20/08	-	-	-	0.011 D	-	-	-	-	-	-	-
W-834-M1	8/20/08	-	-	-	0.01	-	-	-	-	-	-	-
W-834-S1	1/24/08	-	-	-	<0.001	-	-	-	-	-	-	-
W-834-S4	2/20/08	-	-	-	0.0016	-	-	-	-	-	-	-
W-834-S9	3/10/08	-	-	-	0.01 D	-	-	-	-	-	-	-
W-834-S9	3/10/08	-	-	-	0.008	-	-	-	-	-	-	-
W-834-T2	6/16/08	<0.05	-	-	<0.01	<0.05	-	0.023	-	<0.05	-	-

B-2.6. Building 834 Operable Unit high explosives in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-834-2001	7/23/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.83	<1.7	<0.83
W-834-2113	11/18/08	R	R	R	R	R	R	R	R	R	R	R	R	R
W-834-2117	11/18/08	R	R	R	R	R	R	R	R	R	R	R	R	R
W-834-2118	11/18/08	R	R	R	R	R	R	R	R	R	R	R	R	R
W-834-2119	11/18/08	R	R	R	R	R	R	R	R	R	R	R	R	R

B-2.7. Building 834 Operable Unit radiological constituents in ground water.

Location	Date	Gross alpha (pCi/L)	Gross beta (pCi/L)	Tritium (pCi/L)	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
W-834-2001	7/23/08	14.7 ± 4.50	8.50 ± 1.70	<100	11.0 ± 0.0920	-	6.00 ± 0.0900	0.220 ± 0.00110	<0.00091	4.70 ± 0.0190
W-834-2119	11/18/08	-	-	-	10.2 B	<312	<312 E	0.210 ± 0.0212 B	<3.2	5.00 ± 0.580 B

B-2.8. Building 834 Operable Unit general minerals in ground water.

Constituents of concern	W-834-2001 7/23/08	W-834-M1 2/20/08
Total Alkalinity (as CaCO3) (mg/L)	360	80
Aluminum (mg/L)	<0.05	<0.05
Bicarbonate Alk (as CaCO3) (mg/L)	350 D	80
Calcium (mg/L)	18	320 LO
Carbonate Alk (as CaCO3) (mg/L)	11 D	<2.5
Chloride (mg/L)	12	1,500 D
Copper (mg/L)	0.015	<0.01
Fluoride (mg/L)	2 O	0.52 DL
Hydroxide Alk (as CaCO3) (mg/L)	<5 D	<2.5
Iron (mg/L)	<0.05	<0.05
Magnesium (mg/L)	16	280 LO
Manganese (mg/L)	0.13	<0.03
Nickel (mg/L)	0.028	0.047
Nitrate (as N) (mg/L)	<0.5	65 D
Nitrate (as NO3) (mg/L)	<0.44	290
Nitrite (as N) (mg/L)	<0.5	<0.5
pH (Units)	7.97 H	7.17
Ortho-Phosphate (mg/L)	<0.05	0.95
Total Phosphorus (as P) (mg/L)	0.15 HO	0.32 H
Potassium (mg/L)	5.1	26
Sodium (mg/L)	130	870 LO
Total dissolved solids (TDS) (mg/L)	490 D	5,200 DH
Specific Conductance (µmhos/cm)	743	7,210
Sulfate (mg/L)	24	1,500 D
Surfactants (mg/L)	<0.5	<0.5
Total Hardness (as CaCO3) (mg/L)	110	2,000
Zinc (mg/L)	0.011	<0.01

B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW1	1/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	1/2/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	01/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	01/02/08 DUP	E624	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
CARNRW1	2/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	02/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	3/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	03/03/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	4/1/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	04/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	04/01/08 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	5/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	05/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	06/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	7/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	7/1/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	07/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	07/01/08 DUP	E624	<0.5 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H
CARNRW1	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	08/05/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	09/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/1/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	10/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/01/08 DUP	E624	<0.5 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H	<1 H
CARNRW1	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	11/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	12/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	12/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	1/2/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	1/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	01/02/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
CARNRW2	01/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	2/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	02/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	3/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	03/03/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	4/1/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	04/01/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CARNRW2	04/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	5/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	05/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	06/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	7/1/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	7/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	07/01/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
CARNRW2	07/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW2	08/05/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	09/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/1/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/01/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
CARNRW2	10/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	11/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	12/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	12/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	1/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	01/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	2/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	02/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	3/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	03/03/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	04/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	5/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	05/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	06/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	7/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	07/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	08/05/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	09/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	10/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	10/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	11/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	12/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	12/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	1/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	01/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	2/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	02/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	3/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	03/03/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	04/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	5/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	05/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	06/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	7/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	07/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	08/05/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	09/02/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW4	10/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	10/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	11/04/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	12/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	12/01/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BC6-10	1/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BC6-10	8/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	1/3/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	4/2/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	7/8/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	10/2/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-07	1/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-07	7/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-08	1/3/08	E8260	<0.5 E	1.1	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-08	4/3/08	E8260	0.62	1.2	<0.5	<0.5	<0.5	<0.5 E	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	1/2/08	E8260	5.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	01/02/08 DUP	E8260	6.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	4/2/08	E8260	7.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	7/8/08	E8260	8.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	10/2/08	E8260	10	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-09	10/02/08 DUP	E8260	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-1819	1/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-1819	4/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-1819	04/03/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-1819	8/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-1819	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01	7/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	1/2/08	E8260	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	4/2/08	E8260	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	04/02/08 DUP	E8260	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	7/8/08	E8260	<0.5	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	10/2/08	E8260	<0.5 E	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-03	1/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-03	7/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-04	1/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-14	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-14	8/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-16	1/9/08	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-16	8/11/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-16	08/11/08 DUP	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	1/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	01/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	4/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	8/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	08/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-17	12/08/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-18	1/14/08	E601	0.8	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-18	01/14/08 DUP	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-18	8/11/08	E601	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	1/2/08	E8260	0.74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K6-19	01/02/08 DUP	E8260	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	4/2/08	E8260	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	7/7/08	E8260	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	07/07/08 DUP	E8260	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	10/2/08	E8260	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-22	1/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-22	4/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-22	7/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-22	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-23	1/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-23	8/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-24	1/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-25	1/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-25	8/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-26	1/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-26	8/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-27	1/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-27	8/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-32	1/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-33	1/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-34	1/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-34	4/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-34	8/6/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-34	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-35	1/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-35	8/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-33C-01	1/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-33C-01	9/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-34-01	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-34-02	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING8	12/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
CARNRW1	1/2/08	E601	0 of 18	-	-
CARNRW1	1/2/08	E624	0 of 30	-	-
CARNRW1	01/02/08 DUP	E601	0 of 18	-	-
CARNRW1	01/02/08 DUP	E624	0 of 30	-	-
CARNRW1	2/4/08	E601	0 of 18	-	-
CARNRW1	02/04/08 DUP	E601	0 of 18	-	-
CARNRW1	3/3/08	E601	0 of 18	-	-
CARNRW1	03/03/08 DUP	E601	0 of 18	-	-
CARNRW1	4/1/08	E601	0 of 18	-	-
CARNRW1	4/1/08	E624	0 of 30	-	-
CARNRW1	04/01/08 DUP	E601	0 of 18	-	-
CARNRW1	04/01/08 DUP	E624	0 of 30	-	-
CARNRW1	5/1/08	E601	0 of 18	-	-
CARNRW1	05/01/08 DUP	E601	0 of 18	-	-
CARNRW1	6/2/08	E601	0 of 18	-	-
CARNRW1	06/02/08 DUP	E601	0 of 18	-	-
CARNRW1	7/1/08	E601	0 of 18	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
CARNRW1	7/1/08	E624	0 of 30	-	-
CARNRW1	07/01/08 DUP	E601	0 of 18	-	-
CARNRW1	07/01/08 DUP	E624	0 of 30	-	-
CARNRW1	8/5/08	E601	0 of 18	-	-
CARNRW1	08/05/08 DUP	E601	0 of 18	-	-
CARNRW1	9/2/08	E601	0 of 18	-	-
CARNRW1	09/02/08 DUP	E601	0 of 18	-	-
CARNRW1	10/1/08	E601	0 of 18	-	-
CARNRW1	10/1/08	E624	0 of 30	-	-
CARNRW1	10/01/08 DUP	E601	0 of 18	-	-
CARNRW1	10/01/08 DUP	E624	0 of 30	-	-
CARNRW1	11/4/08	E601	0 of 18	-	-
CARNRW1	11/04/08 DUP	E601	0 of 18	-	-
CARNRW1	12/1/08	E601	0 of 18	-	-
CARNRW1	12/01/08 DUP	E601	0 of 18	-	-
CARNRW2	1/2/08	E502.2	0 of 46	-	-
CARNRW2	1/2/08	E601	0 of 18	-	-
CARNRW2	01/02/08 DUP	E502.2	0 of 45	-	-
CARNRW2	01/02/08 DUP	E601	0 of 18	-	-
CARNRW2	2/4/08	E601	0 of 18	-	-
CARNRW2	02/04/08 DUP	E601	0 of 18	-	-
CARNRW2	3/3/08	E601	0 of 18	-	-
CARNRW2	03/03/08 DUP	E601	0 of 18	-	-
CARNRW2	4/1/08	E502.2	0 of 46	-	-
CARNRW2	4/1/08	E601	0 of 18	-	-
CARNRW2	04/01/08 DUP	E502.2	0 of 45	-	-
CARNRW2	04/01/08 DUP	E601	0 of 18	-	-
CARNRW2	5/1/08	E601	0 of 18	-	-
CARNRW2	05/01/08 DUP	E601	0 of 18	-	-
CARNRW2	6/2/08	E601	0 of 18	-	-
CARNRW2	06/02/08 DUP	E601	0 of 18	-	-
CARNRW2	7/1/08	E502.2	0 of 46	-	-
CARNRW2	7/1/08	E601	0 of 18	-	-
CARNRW2	07/01/08 DUP	E502.2	0 of 45	-	-
CARNRW2	07/01/08 DUP	E601	0 of 18	-	-
CARNRW2	8/5/08	E601	0 of 18	-	-
CARNRW2	08/05/08 DUP	E601	0 of 18	-	-
CARNRW2	9/2/08	E601	0 of 18	-	-
CARNRW2	09/02/08 DUP	E601	0 of 18	-	-
CARNRW2	10/1/08	E502.2	0 of 46	-	-
CARNRW2	10/1/08	E601	0 of 18	-	-
CARNRW2	10/01/08 DUP	E502.2	0 of 45	-	-
CARNRW2	10/01/08 DUP	E601	0 of 18	-	-
CARNRW2	11/4/08	E601	0 of 18	-	-
CARNRW2	11/04/08 DUP	E601	0 of 18	-	-
CARNRW2	12/1/08	E601	0 of 18	-	-
CARNRW2	12/01/08 DUP	E601	0 of 18	-	-
CARNRW3	1/2/08	E601	0 of 18	-	-
CARNRW3	01/02/08 DUP	E601	0 of 18	-	-
CARNRW3	2/4/08	E601	0 of 18	-	-
CARNRW3	02/04/08 DUP	E601	0 of 18	-	-
CARNRW3	3/3/08	E601	0 of 18	-	-
CARNRW3	03/03/08 DUP	E601	0 of 18	-	-
CARNRW3	4/1/08	E601	0 of 18	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
CARNRW3	04/01/08 DUP	E601	0 of 18	-	-
CARNRW3	39569	E601	0 of 18	-	-
CARNRW3	05/01/08 DUP	E601	0 of 18	-	-
CARNRW3	6/2/08	E601	0 of 18	-	-
CARNRW3	06/02/08 DUP	E601	0 of 18	-	-
CARNRW3	7/1/08	E601	0 of 18	-	-
CARNRW3	07/01/08 DUP	E601	0 of 18	-	-
CARNRW3	8/5/08	E601	0 of 18	-	-
CARNRW3	08/05/08 DUP	E601	0 of 18	-	-
CARNRW3	9/2/08	E601	0 of 18	-	-
CARNRW3	09/02/08 DUP	E601	0 of 18	-	-
CARNRW3	10/1/08	E601	0 of 18	-	-
CARNRW3	10/01/08 DUP	E601	0 of 18	-	-
CARNRW3	11/4/08	E601	0 of 18	-	-
CARNRW3	11/04/08 DUP	E601	0 of 18	-	-
CARNRW3	12/1/08	E601	0 of 18	-	-
CARNRW3	12/01/08 DUP	E601	0 of 18	-	-
CARNRW4	1/2/08	E601	0 of 18	-	-
CARNRW4	01/02/08 DUP	E601	0 of 18	-	-
CARNRW4	2/4/08	E601	0 of 18	-	-
CARNRW4	02/04/08 DUP	E601	0 of 18	-	-
CARNRW4	3/3/08	E601	0 of 18	-	-
CARNRW4	03/03/08 DUP	E601	0 of 18	-	-
CARNRW4	4/1/08	E601	0 of 18	-	-
CARNRW4	04/01/08 DUP	E601	0 of 18	-	-
CARNRW4	5/1/08	E601	0 of 18	-	-
CARNRW4	05/01/08 DUP	E601	0 of 18	-	-
CARNRW4	6/2/08	E601	0 of 18	-	-
CARNRW4	06/02/08 DUP	E601	0 of 18	-	-
CARNRW4	7/1/08	E601	0 of 18	-	-
CARNRW4	07/01/08 DUP	E601	0 of 18	-	-
CARNRW4	8/5/08	E601	0 of 18	-	-
CARNRW4	08/05/08 DUP	E601	0 of 18	-	-
CARNRW4	9/2/08	E601	0 of 18	-	-
CARNRW4	09/02/08 DUP	E601	0 of 18	-	-
CARNRW4	10/1/08	E601	0 of 18	-	-
CARNRW4	10/01/08 DUP	E601	0 of 18	-	-
CARNRW4	11/4/08	E601	0 of 18	-	-
CARNRW4	11/04/08 DUP	E601	0 of 18	-	-
CARNRW4	12/1/08	E601	0 of 18	-	-
CARNRW4	12/01/08 DUP	E601	0 of 18	-	-
BC6-10	1/16/08	E601	0 of 18	-	-
BC6-10	8/11/08	E601	0 of 18	-	-
EP6-06	1/3/08	E8260	0 of 36	-	-
EP6-06	4/2/08	E8260	0 of 39	-	-
EP6-06	7/8/08	E8260	0 of 36	-	-
EP6-06	10/2/08	E8260	0 of 36	-	-
EP6-07	1/14/08	E601	0 of 18	-	-
EP6-07	7/7/08	E601	0 of 18	-	-
EP6-08	1/3/08	E8260	0 of 36	-	-
EP6-08	4/3/08	E8260	0 of 39	-	-
EP6-09	1/2/08	E8260	0 of 36	-	-
EP6-09	01/02/08 DUP	E8260	0 of 36	-	-
EP6-09	4/2/08	E8260	0 of 39	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
EP6-09	7/8/08	E8260	1 of 36	-	140
EP6-09	10/2/08	E8260	0 of 36	-	-
EP6-09	10/02/08 DUP	E8260	0 of 36	-	-
W-PIT6-1819	1/16/08	E601	0 of 18	-	-
W-PIT6-1819	4/3/08	E601	0 of 18	-	-
W-PIT6-1819	04/03/08 DUP	E601	0 of 18	-	-
W-PIT6-1819	8/6/08	E601	0 of 18	-	-
W-PIT6-1819	12/8/08	E601	0 of 18	-	-
K6-01	1/8/08	E601	0 of 18	-	-
K6-01	7/31/08	E601	0 of 18	-	-
K6-01S	1/2/08	E8260	1 of 36	2.1	-
K6-01S	4/2/08	E8260	1 of 39	2.2	-
K6-01S	04/02/08 DUP	E8260	1 of 39	2.2	-
K6-01S	7/8/08	E8260	1 of 36	2.4	-
K6-01S	10/2/08	E8260	1 of 36	2.1	-
K6-03	1/15/08	E601	0 of 18	-	-
K6-03	7/31/08	E601	0 of 18	-	-
K6-04	1/15/08	E601	0 of 18	-	-
K6-14	1/8/08	E601	0 of 18	-	-
K6-14	8/11/08	E601	0 of 18	-	-
K6-16	1/9/08	E601	0 of 18	-	-
K6-16	8/11/08	E601	0 of 18	-	-
K6-16	08/11/08 DUP	E601	0 of 18	-	-
K6-17	1/14/08	E601	0 of 18	-	-
K6-17	01/14/08 DUP	E601	0 of 18	-	-
K6-17	4/3/08	E601	0 of 18	-	-
K6-17	8/11/08	E601	0 of 18	-	-
K6-17	08/11/08 DUP	E601	0 of 18	-	-
K6-17	12/8/08	E601	0 of 18	-	-
K6-17	12/08/08 DUP	E601	0 of 18	-	-
K6-18	1/14/08	E601	0 of 18	-	-
K6-18	01/14/08 DUP	E601	0 of 18	-	-
K6-18	8/11/08	E601	0 of 18	-	-
K6-19	1/2/08	E8260	0 of 36	-	-
K6-19	01/02/08 DUP	E8260	0 of 36	-	-
K6-19	4/2/08	E8260	0 of 39	-	-
K6-19	7/7/08	E8260	0 of 36	-	-
K6-19	07/07/08 DUP	E8260	0 of 36	-	-
K6-19	10/2/08	E8260	0 of 36	-	-
K6-22	1/9/08	E601	0 of 18	-	-
K6-22	4/3/08	E601	0 of 18	-	-
K6-22	7/31/08	E601	0 of 18	-	-
K6-22	12/8/08	E601	0 of 18	-	-
K6-23	1/8/08	E601	0 of 18	-	-
K6-23	8/6/08	E601	0 of 18	-	-
K6-24	1/10/08	E601	0 of 18	-	-
K6-25	1/16/08	E601	0 of 18	-	-
K6-25	8/11/08	E601	0 of 18	-	-
K6-26	1/10/08	E601	0 of 18	-	-
K6-26	8/6/08	E601	0 of 18	-	-
K6-27	1/10/08	E601	0 of 18	-	-
K6-27	8/6/08	E601	0 of 18	-	-
K6-32	1/15/08	E601	0 of 18	-	-
K6-33	1/9/08	E601	0 of 18	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Acetone (µg/L)
K6-34	1/16/08	E601	0 of 18	-	-
K6-34	4/3/08	E601	0 of 18	-	-
K6-34	8/6/08	E601	0 of 18	-	-
K6-34	12/8/08	E601	0 of 18	-	-
K6-35	1/15/08	E601	0 of 18	-	-
K6-35	8/11/08	E601	0 of 18	-	-
W-33C-01	1/15/08	E601	0 of 18	-	-
W-33C-01	9/17/08	E601	0 of 18	-	-
W-34-01	3/20/08	E601	0 of 18	-	-
W-34-02	3/20/08	E601	0 of 18	-	-
SPRING8	12/8/08	E601	0 of 18	-	-

B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
CARNRW1	1/2/08	<0.5	<4
CARNRW1	01/02/08 DUP	<0.5 L	<4
CARNRW1	2/4/08	<0.5	<4
CARNRW1	02/04/08 DUP	<0.5	<4
CARNRW1	3/3/08	<0.5	<4
CARNRW1	03/03/08 DUP	<0.5	<4
CARNRW1	4/1/08	<0.5	<4
CARNRW1	04/01/08 DUP	<0.5	<4
CARNRW1	5/1/08	<0.5	<4
CARNRW1	05/01/08 DUP	<0.5	<4
CARNRW1	6/2/08	<0.5	<4
CARNRW1	06/02/08 DUP	<0.5	<4 L
CARNRW1	7/1/08	<0.5	<4
CARNRW1	07/01/08 DUP	<0.5 L	<4
CARNRW1	8/5/08	<0.5	<4
CARNRW1	08/05/08 DUP	<0.5 L	<4
CARNRW1	9/2/08	<0.5	<4
CARNRW1	09/02/08 DUP	<0.5 L	<4
CARNRW1	10/1/08	<0.5	<4
CARNRW1	10/01/08 DUP	<0.5	<4
CARNRW1	11/4/08	<0.5	<4
CARNRW1	11/04/08 DUP	<0.5	<4 L
CARNRW1	12/1/08	<0.5	<4
CARNRW1	12/01/08 DUP	<0.5	<4
CARNRW2	1/2/08	<0.5	<4
CARNRW2	01/02/08 DUP	<0.5 L	<4
CARNRW2	2/4/08	<0.5	<4
CARNRW2	02/04/08 DUP	<0.5	<4
CARNRW2	3/3/08	<0.5	<4
CARNRW2	03/03/08 DUP	<0.5	<4
CARNRW2	4/1/08	<0.5	<4
CARNRW2	04/01/08 DUP	<0.5	<4
CARNRW2	5/1/08	<0.5	<4
CARNRW2	05/01/08 DUP	<0.5	<4
CARNRW2	6/2/08	<0.5	<4
CARNRW2	06/02/08 DUP	<0.5	<4 L
CARNRW2	7/1/08	0.66	<4
CARNRW2	07/01/08 DUP	<0.5 L	<4
CARNRW2	8/5/08	<0.5	<4
CARNRW2	08/05/08 DUP	<0.5 L	<4
CARNRW2	9/2/08	0.62	<4
CARNRW2	09/02/08 DUP	0.6 L	<4
CARNRW2	10/1/08	<0.5	<4
CARNRW2	10/01/08 DUP	<0.5	<4
CARNRW2	11/4/08	<0.5	<4
CARNRW2	11/04/08 DUP	<0.5 H	<4 L
CARNRW2	12/1/08	<0.5	<4
CARNRW2	12/01/08 DUP	<0.5	<4

B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
CARNRW3	1/2/08	<0.5	<4
CARNRW3	01/02/08 DUP	<0.5 L	<4
CARNRW3	2/4/08	<0.5	<4
CARNRW3	02/04/08 DUP	<0.5	<4
CARNRW3	3/3/08	<0.5	<4
CARNRW3	03/03/08 DUP	<0.5	<4
CARNRW3	4/1/08	<0.5	<4
CARNRW3	04/01/08 DUP	<0.5	<4
CARNRW3	5/1/08	<0.5	<4
CARNRW3	05/01/08 DUP	<0.5	<4
CARNRW3	6/2/08	<0.5	<4
CARNRW3	06/02/08 DUP	<0.5	<4 L
CARNRW3	7/1/08	<0.5	<4
CARNRW3	07/01/08 DUP	<0.5 L	<4
CARNRW3	8/5/08	<0.5	<4
CARNRW3	08/05/08 DUP	<0.5 L	<4
CARNRW3	9/2/08	<0.5	<4
CARNRW3	09/02/08 DUP	<0.5 L	<4
CARNRW3	10/1/08	<0.5	<4
CARNRW3	10/01/08 DUP	<0.5	<4
CARNRW3	11/4/08	<0.5	<4
CARNRW3	11/04/08 DUP	<0.5	<4 L
CARNRW3	12/1/08	<0.5	<4
CARNRW3	12/01/08 DUP	<0.5	<4
CARNRW4	1/2/08	<0.5	<4
CARNRW4	01/02/08 DUP	<0.5 L	<4
CARNRW4	2/4/08	19 D	<4
CARNRW4	02/04/08 DUP	19	<4
CARNRW4	3/3/08	16	<4
CARNRW4	03/03/08 DUP	15 D	<4
CARNRW4	4/1/08	9.6	<4
CARNRW4	04/01/08 DUP	7.1	<4
CARNRW4	5/1/08	4.8	<4
CARNRW4	05/01/08 DUP	3.4	<4
CARNRW4	6/2/08	2.9	<4
CARNRW4	06/02/08 DUP	<0.5	<4 L
CARNRW4	7/1/08	2.4	<4
CARNRW4	07/01/08 DUP	<0.5 L	<4
CARNRW4	8/5/08	0.87	<4
CARNRW4	08/05/08 DUP	0.67 L	<4
CARNRW4	9/2/08	<0.5	<4
CARNRW4	09/02/08 DUP	<0.5 L	<4
CARNRW4	10/1/08	<0.5	<4
CARNRW4	10/01/08 DUP	<0.5	<4
CARNRW4	11/4/08	<0.5	<4
CARNRW4	11/04/08 DUP	<0.5	<4 L
CARNRW4	12/1/08	<0.5	<4
CARNRW4	12/01/08 DUP	<0.5	<4

B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
BC6-10	1/16/08	0.66	<4
EP6-06	1/3/08	<0.5	<4
EP6-06	4/2/08	<0.5	<4
EP6-06	7/8/08	<0.5	<4
EP6-06	10/2/08	3.1 O	<4
EP6-07	1/14/08	<0.5	<4
EP6-08	1/3/08	<0.5	<4
EP6-08	4/3/08	0.72	<4
EP6-09	1/2/08	<1 DE	<4 E
EP6-09	01/02/08 DUP	1.8	<4
EP6-09	4/2/08	3.7	<4 E
EP6-09	7/8/08	3.6 DB	<4
EP6-09	10/2/08	<0.5 O	<4
EP6-09	10/02/08 DUP	4.4 O	<4
W-PIT6-1819	1/16/08	<0.5	<4
W-PIT6-1819	8/6/08	0.46	<4
K6-01	1/8/08	<0.5	<4
K6-01S	1/2/08	<2.5 D	<4
K6-01S	4/2/08	1.7 D	<4
K6-01S	04/02/08 DUP	<1 D	<4
K6-01S	7/8/08	<1 D	<4
K6-01S	10/2/08	<2.5 DO	<4
K6-03	1/15/08	0.5	<4
K6-04	1/15/08	6.9	<4
K6-14	1/8/08	<0.5	<4
K6-16	1/9/08	7.7	<4
K6-17	1/14/08	<0.5	<4
K6-17	01/14/08 DUP	<0.5	<4
K6-17	8/11/08	<0.5	<4
K6-17	08/11/08 DUP	<0.5	<4
K6-17	11/17/08	<0.88 D	-
K6-18	1/14/08	9.9	<4
K6-18	01/14/08 DUP	10 D	5.5
K6-19	1/2/08	<0.5	<4
K6-19	01/02/08 DUP	<0.5	<4
K6-19	4/2/08	<0.5	<4
K6-19	7/7/08	<0.5	<4
K6-19	07/07/08 DUP	<0.5	<4
K6-19	10/2/08	<0.5 O	<4
K6-22	1/9/08	<0.5	<4
K6-22	7/31/08	<0.5	<4
K6-23	1/8/08	160 D	<4
K6-23	11/17/08	210 D	-
K6-24	1/10/08	1.5	<4
K6-25	1/16/08	<0.5	<4
K6-26	1/10/08	<0.5	<4
K6-27	1/10/08	<0.5	<4
K6-32	1/15/08	0.87	<4

B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K6-33	1/9/08	0.64	<4
K6-34	1/9/08	<0.5 E	-
K6-34	1/16/08	<0.5	<4
K6-34	8/6/08	<0.44	<4
K6-35	1/15/08	<0.5	<4
W-33C-01	1/15/08	1.7	<4
W-34-01	3/20/08	0.69	<4
W-34-02	3/20/08	<0.5	<4
SPRING8	12/8/08	-	<4

B-3.3. Pit 6 Landfill Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
CARNRW1	1/2/08	<100
CARNRW1	01/02/08 DUP	<100
CARNRW1	2/4/08	<100
CARNRW1	02/04/08 DUP	<100
CARNRW1	3/3/08	<100
CARNRW1	03/03/08 DUP	<100
CARNRW1	4/1/08	111 ± 52.0
CARNRW1	04/01/08 DUP	<100
CARNRW1	5/1/08	<100
CARNRW1	05/01/08 DUP	<100
CARNRW1	6/2/08	<100
CARNRW1	06/02/08 DUP	<100
CARNRW1	7/1/08	<100
CARNRW1	07/01/08 DUP	<100
CARNRW1	8/5/08	<100
CARNRW1	08/05/08 DUP	<100
CARNRW1	9/2/08	<100
CARNRW1	09/02/08 DUP	<100
CARNRW1	10/1/08	<100
CARNRW1	10/01/08 DUP	<100
CARNRW1	11/4/08	<100
CARNRW1	11/04/08 DUP	<100
CARNRW1	12/1/08	<100
CARNRW1	12/01/08 DUP	<100
CARNRW2	1/2/08	<100
CARNRW2	01/02/08 DUP	<100
CARNRW2	2/4/08	<100
CARNRW2	02/04/08 DUP	<100
CARNRW2	3/3/08	<100
CARNRW2	03/03/08 DUP	<100
CARNRW2	4/1/08	134 ± 53.0
CARNRW2	04/01/08 DUP	<100
CARNRW2	5/1/08	<100
CARNRW2	05/01/08 DUP	<100
CARNRW2	6/2/08	<100
CARNRW2	06/02/08 DUP	<100
CARNRW2	7/1/08	<100
CARNRW2	07/01/08 DUP	<100
CARNRW2	8/5/08	<100
CARNRW2	08/05/08 DUP	<100
CARNRW2	9/2/08	<100
CARNRW2	09/02/08 DUP	<100
CARNRW2	10/1/08	<100
CARNRW2	10/01/08 DUP	<100
CARNRW2	11/4/08	<100
CARNRW2	11/04/08 DUP	<100

B-3.3. Pit 6 Landfill Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
CARNRW2	12/1/08	<100
CARNRW2	12/01/08 DUP	<100
CARNRW3	1/2/08	<100
CARNRW3	01/02/08 DUP	<100
CARNRW3	2/4/08	<100
CARNRW3	02/04/08 DUP	<100
CARNRW3	3/3/08	<100
CARNRW3	03/03/08 DUP	<100
CARNRW3	4/1/08	<100
CARNRW3	04/01/08 DUP	<100
CARNRW3	5/1/08	<100
CARNRW3	05/01/08 DUP	<100
CARNRW3	6/2/08	<100
CARNRW3	06/02/08 DUP	<100
CARNRW3	7/1/08	<100
CARNRW3	07/01/08 DUP	<100
CARNRW3	8/5/08	<100
CARNRW3	08/05/08 DUP	<100
CARNRW3	9/2/08	<100
CARNRW3	09/02/08 DUP	<100
CARNRW3	10/1/08	<100
CARNRW3	10/01/08 DUP	<100
CARNRW3	11/4/08	<100
CARNRW3	11/04/08 DUP	<100
CARNRW3	12/1/08	<100
CARNRW3	12/01/08 DUP	<100
CARNRW4	1/2/08	<100
CARNRW4	01/02/08 DUP	<100
CARNRW4	2/4/08	<100
CARNRW4	02/04/08 DUP	<100
CARNRW4	3/3/08	<100
CARNRW4	03/03/08 DUP	<100
CARNRW4	4/1/08	113 ± 50.0
CARNRW4	04/01/08 DUP	<100
CARNRW4	5/1/08	<100
CARNRW4	05/01/08 DUP	<100
CARNRW4	6/2/08	<100
CARNRW4	06/02/08 DUP	<100
CARNRW4	7/1/08	<100
CARNRW4	07/01/08 DUP	<100
CARNRW4	8/5/08	<100
CARNRW4	08/05/08 DUP	<100
CARNRW4	9/2/08	<100
CARNRW4	09/02/08 DUP	<100
CARNRW4	10/1/08	<100
CARNRW4	10/01/08 DUP	<100

B-3.3. Pit 6 Landfill Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
CARNRW4	11/4/08	<100
CARNRW4	11/04/08 DUP	<100
CARNRW4	12/1/08	<100
CARNRW4	12/01/08 DUP	<100
BC6-10	1/16/08	<100
BC6-10	8/11/08	<100
EP6-06	1/3/08	<100
EP6-06	4/2/08	<100
EP6-06	7/8/08	<100
EP6-06	10/2/08	<100
EP6-07	1/14/08	<100
EP6-07	7/7/08	<100
EP6-08	1/3/08	<100
EP6-08	4/3/08	<100
EP6-09	1/2/08	<100
EP6-09	01/02/08 DUP	<100
EP6-09	4/2/08	<100
EP6-09	7/8/08	<100
EP6-09	10/2/08	<100
EP6-09	10/02/08 DUP	<100
W-PIT6-1819	1/16/08	127 ± 57.0
W-PIT6-1819	4/3/08	123 ± 53.0
W-PIT6-1819	04/03/08 DUP	146 ± 56.4
W-PIT6-1819	8/6/08	161 ± 58.0
W-PIT6-1819	12/8/08	<100 S
K6-01	1/8/08	<100
K6-01	7/31/08	<100
K6-01S	1/2/08	115 ± 55.0
K6-01S	4/2/08	<100
K6-01S	04/02/08 DUP	<100
K6-01S	7/8/08	<100
K6-01S	10/2/08	<100
K6-03	1/15/08	<100
K6-03	7/31/08	<100
K6-04	1/15/08	<100
K6-14	1/8/08	<100
K6-14	8/11/08	<100
K6-16	1/9/08	<100
K6-16	8/11/08	<100
K6-16	08/11/08 DUP	<100
K6-17	1/14/08	<100
K6-17	01/14/08 DUP	<100
K6-17	4/3/08	<100
K6-17	8/11/08	<100
K6-17	08/11/08 DUP	<100
K6-17	12/8/08	<100

B-3.3. Pit 6 Landfill Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K6-17	12/08/08 DUP	<100
K6-18	1/14/08	241 ± 59.0
K6-18	01/14/08 DUP	248 ± 77.2
K6-18	8/11/08	316 ± 66.0
K6-19	1/2/08	312 ± 65.0
K6-19	01/02/08 DUP	314 ± 66.0
K6-19	4/2/08	225 ± 61.0
K6-19	7/7/08	207 ± 61.0
K6-19	07/07/08 DUP	260 ± 63.0
K6-19	10/2/08	258 ± 61.0
K6-22	1/9/08	<100
K6-22	4/3/08	<100
K6-22	7/31/08	<100
K6-22	12/8/08	<100
K6-23	1/8/08	<100
K6-23	8/6/08	<100
K6-24	1/10/08	407 ± 72.0
K6-25	1/16/08	<100
K6-25	8/11/08	<100
K6-26	1/10/08	<100
K6-26	8/6/08	<100
K6-27	1/10/08	<100
K6-27	8/6/08	<100
K6-32	1/15/08	<100
K6-33	1/9/08	221 ± 58.0
K6-34	1/16/08	<100
K6-34	4/3/08	<100
K6-34	8/6/08	<100
K6-34	12/8/08	255 ± 60.0 S
K6-35	1/15/08	<100
K6-35	8/11/08	<100
W-33C-01	1/15/08	<100
W-33C-01	9/17/08	<100
W-34-01	3/20/08	<100
W-34-02	3/20/08	<100
SPRING8	12/8/08	<100

B-3.4. Pit 6 Landfill Operable Unit metals in surface water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
SPRING8	12/8/08	<0.05	0.044	<0.0002 L	<0.001	<0.001	<0.005	<0.0002	<0.05	<0.001

B-3.5. Pit 6 Landfill Operable Unit high explosives in surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
SPRING8	12/8/08	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<0.63	<1.3	<0.63

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-815-2110	2/19/08	E601	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2110	5/8/08	E601	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2110	8/19/08	E601	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2110	12/10/08	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2111	2/19/08	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2111	5/8/08	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2111	8/19/08	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2111	12/10/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2111	12/10/08 DUP	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	3/13/08	E601	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	5/20/08	E601	50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	7/10/08	E601	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	10/6/08	E601	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	1/9/08	E502.2	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	1/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	01/09/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	01/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	2/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	02/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	3/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	03/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	4/9/08	E502.2	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	4/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	04/09/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
GALLO1	04/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	5/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	05/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	6/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	06/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	7/9/08	E502.2	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	7/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	07/09/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	07/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	8/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	08/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	9/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	09/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	10/8/08	E502.2	0.51	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	10/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
GALLO1	10/08/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	10/08/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	11/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	12/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	12/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	2/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	8/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	2/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	8/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	2/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	8/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	2/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	8/18/08	E601	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	2/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	8/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-01	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-01	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-02	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-02	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-04	1/14/08	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-04	7/9/08	E601	9.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-05	1/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-05	8/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-06	1/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-06	8/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-07	1/7/08	E601	2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-07	01/07/08 DUP	E601	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-07	8/14/08	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-07	08/14/08 DUP	E601	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-08	1/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-08	8/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	3/20/08	E601	1.7 S	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	03/20/08 DUP	E601	5.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	9/11/08	E601	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4AS	3/20/08	E601	6.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-4AS	9/11/08	E601	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4B	2/26/08	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4B	9/3/08	E601	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	2/26/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	5/27/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	05/27/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BD	2/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BD	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	2/25/08	E601	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	8/25/08	E601	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CD	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CD	9/10/08	E601	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6EI	1/28/08	E601	4.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6EI	8/14/08	E601	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ER	1/14/08	E601	9.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ER	7/9/08	E601	7.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ES	1/28/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ES	8/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	8/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6G	1/30/08	E601	5.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6G	8/25/08	E601	7.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	5/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	12/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6I	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6I	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	5/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	12/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6K	1/29/08	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6K	01/29/08 DUP	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6K	8/21/08	E601	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6L	1/29/08	E601	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6L	01/29/08 DUP	E601	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6L	8/21/08	E601	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6L	08/21/08 DUP	E601	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-808-01	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-808-01	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-808-03	3/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-808-03	9/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-809-01	3/11/08	E601	2.7 L	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	1.9 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	9/2/08	E601	2.1	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	09/02/08 DUP	E601	2.4	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-02	3/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-03	3/20/08	E601	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-04	3/11/08	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-810-01	3/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-810-01	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	3/20/08	E601	1.7	<0.5	1	<0.5	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	03/20/08 DUP	E601	1.9	<0.5	1.2	<0.5	0.61	0.69	<0.5	0.75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	8/26/08	E601	2.1	<0.5	1.2	<0.5	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-02	2/13/08	E601	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-02	8/26/08	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	1/28/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	5/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	8/21/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-2138	2/13/08	E601	7.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-2138	11/24/08	E624	7.1 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
W-815-02	1/9/08	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	7/10/08	E601	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	1/9/08	E601	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	7/10/08	E601	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-05	2/27/08	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-05	9/11/08	E601	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	2/13/08	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	02/13/08 DUP	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	8/26/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	08/26/08 DUP	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-07	2/26/08	E601	18	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-07	8/26/08	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-08	3/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-08	6/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-08	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-08	11/24/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-1928	3/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-1928	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2217	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2217	9/22/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-01	1/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-01	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-01	7/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-01	10/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03	1/14/08	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03	7/10/08	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03	10/6/08	E601	8.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03A	3/13/08	E601	37 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03A	9/3/08	E601	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-817-03A	09/03/08 DUP	E601	<0.5 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-04	3/5/08	E601	2.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-05	3/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-05	9/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-07	3/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-07	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-01	2/13/08	E601	17	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-01	8/26/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-01	08/26/08 DUP	E601	17	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-03	2/26/08	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-03	9/3/08	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-04	2/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-04	8/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-06	2/12/08	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-06	02/12/08 DUP	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-06	8/20/08	E601	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-07	2/12/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-07	8/20/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-08	1/29/08	E601	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-08	7/10/08	E601	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-09	1/29/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-09	7/10/08	E601	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	2/13/08	E601	44	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	8/26/08	E601	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
W-819-02	1/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-819-02	8/21/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-01	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-01	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-02	2/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-02	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-03	2/19/08	E601	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-03	8/19/08	E601	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-13	3/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-13	8/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-05	2/26/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-05	9/22/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-06	2/13/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-06	6/10/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-06	7/8/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-15	4/17/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-15	04/17/08 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	1/17/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	01/17/08 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	4/16/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	7/17/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	07/17/08 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	10/9/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-829-1938	10/09/08 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1940	1/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-1940	9/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-1940	9/3/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1940	12/2/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-22	4/21/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
WELL18	1/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	01/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	2/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	02/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	3/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	03/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	4/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	04/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	5/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	05/14/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	6/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	06/11/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	7/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	07/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	8/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	08/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	9/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	09/10/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	10/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	10/08/08 DUP	E601	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	11/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	11/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	12/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	12/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	1/9/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	01/09/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	01/09/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	2/13/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	02/13/08 DUP	E502.2	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR
WELL20	02/13/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
WELL20	3/12/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	03/12/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	4/9/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	04/09/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	5/14/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	05/14/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	6/11/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	7/9/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	07/09/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	8/13/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	08/13/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	9/10/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	09/10/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	10/8/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	10/08/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	11/12/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	11/12/08 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	12/9/08	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	12/09/08 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
W-815-2110	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-815-2110	5/8/08	E601	0 of 18	-	-	-	-	-	-
W-815-2110	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-815-2110	12/10/08	E601	0 of 18	-	-	-	-	-	-
W-815-2111	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-815-2111	5/8/08	E601	0 of 18	-	-	-	-	-	-
W-815-2111	8/19/08	E601	1 of 18	-	-	-	0.8	-	-
W-815-2111	12/10/08	E601	0 of 18	-	-	-	-	-	-
W-815-2111	12/10/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-817-2318	3/13/08	E601	0 of 18	-	-	-	-	-	-
W-817-2318	5/20/08	E601	0 of 18	-	-	-	-	-	-
W-817-2318	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-817-2318	10/6/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	1/9/08	E502.2	0 of 46	-	-	-	-	-	-
GALLO1	1/9/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	01/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
GALLO1	01/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	2/13/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	02/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	3/12/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	03/12/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	4/9/08	E502.2	0 of 46	-	-	-	-	-	-
GALLO1	4/9/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	04/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
GALLO1	04/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	5/14/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	05/14/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	6/11/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	06/11/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	7/9/08	E502.2	0 of 46	-	-	-	-	-	-
GALLO1	7/9/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	07/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
GALLO1	07/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	8/13/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	08/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	9/10/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	09/10/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	10/8/08	E502.2	0 of 46	-	-	-	-	-	-
GALLO1	10/8/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	10/08/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
GALLO1	10/08/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	11/11/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	11/11/08 DUP	E601	0 of 18	-	-	-	-	-	-
GALLO1	12/9/08	E601	0 of 18	-	-	-	-	-	-
GALLO1	12/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-35B-01	2/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-01	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-01	8/18/08	E601	0 of 18	-	-	-	-	-	-
W-35B-01	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-35B-02	2/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-02	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-02	8/18/08	E601	0 of 18	-	-	-	-	-	-
W-35B-02	11/24/08	E601	0 of 18	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
W-35B-03	2/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-03	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-03	8/18/08	E601	0 of 18	-	-	-	-	-	-
W-35B-03	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-35B-04	2/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-04	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-04	8/18/08	E601	0 of 18	-	-	-	-	-	-
W-35B-04	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-35B-05	2/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-05	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-35B-05	8/18/08	E601	0 of 18	-	-	-	-	-	-
W-35B-05	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-35C-01	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-35C-01	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-35C-02	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-35C-02	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-35C-04	1/14/08	E601	0 of 18	-	-	-	-	-	-
W-35C-04	7/9/08	E601	0 of 18	-	-	-	-	-	-
W-35C-05	1/17/08	E601	0 of 18	-	-	-	-	-	-
W-35C-05	8/14/08	E601	0 of 18	-	-	-	-	-	-
W-35C-06	1/17/08	E601	0 of 18	-	-	-	-	-	-
W-35C-06	8/14/08	E601	0 of 18	-	-	-	-	-	-
W-35C-07	1/7/08	E601	0 of 18	-	-	-	-	-	-
W-35C-07	01/07/08 DUP	E601	1 of 18	-	-	-	-	-	0.5
W-35C-07	8/14/08	E601	1 of 18	-	-	-	-	-	1.3
W-35C-07	08/14/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-35C-08	1/7/08	E601	0 of 18	-	-	-	-	-	-
W-35C-08	8/14/08	E601	0 of 18	-	-	-	-	-	-
W-4A	3/20/08	E601	0 of 18	-	-	-	-	-	-
W-4A	03/20/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-4A	9/11/08	E601	0 of 18	-	-	-	-	-	-
W-4AS	3/20/08	E601	0 of 18	-	-	-	-	-	-
W-4AS	9/11/08	E601	0 of 18	-	-	-	-	-	-
W-4B	2/26/08	E601	0 of 18	-	-	-	-	-	-
W-4B	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-4C	2/26/08	E601	0 of 18	-	-	-	-	-	-
W-4C	5/27/08	E601	0 of 18	-	-	-	-	-	-
W-4C	05/27/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-4C	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-4C	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-6BD	2/25/08	E601	0 of 18	-	-	-	-	-	-
W-6BD	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-6BS	2/25/08	E601	0 of 18	-	-	-	-	-	-
W-6BS	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-6CD	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-6CD	9/10/08	E601	0 of 18	-	-	-	-	-	-
W-6CI	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-6CI	8/25/08	E601	0 of 18	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
W-6CS	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-6CS	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-6EI	1/28/08	E601	0 of 18	-	-	-	-	-	-
W-6EI	8/14/08	E601	0 of 18	-	-	-	-	-	-
W-6ER	1/14/08	E601	0 of 18	-	-	-	-	-	-
W-6ER	7/9/08	E601	0 of 18	-	-	-	-	-	-
W-6ES	1/28/08	E601	0 of 18	-	-	-	-	-	-
W-6ES	8/14/08	E601	0 of 18	-	-	-	-	-	-
W-6F	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-6F	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-6G	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-6G	8/25/08	E601	0 of 18	-	-	-	-	-	-
W-6H	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-6H	5/8/08	E601	0 of 18	-	-	-	-	-	-
W-6H	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-6H	12/10/08	E601	0 of 18	-	-	-	-	-	-
W-6I	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-6I	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-6J	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-6J	5/8/08	E601	0 of 18	-	-	-	-	-	-
W-6J	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-6J	12/10/08	E601	0 of 18	-	-	-	-	-	-
W-6K	1/29/08	E601	0 of 18	-	-	-	-	-	-
W-6K	01/29/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-6K	8/21/08	E601	0 of 18	-	-	-	-	-	-
W-6L	1/29/08	E601	0 of 18	-	-	-	-	-	-
W-6L	01/29/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-6L	8/21/08	E601	0 of 18	-	-	-	-	-	-
W-6L	08/21/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-808-01	1/31/08	E601	0 of 18	-	-	-	-	-	-
W-808-01	9/2/08	E601	0 of 18	-	-	-	-	-	-
W-808-03	3/25/08	E601	0 of 18	-	-	-	-	-	-
W-808-03	9/2/08	E601	0 of 18	-	-	-	-	-	-
W-809-01	3/11/08	E601	0 of 18	-	-	-	-	-	-
W-809-01	9/2/08	E601	0 of 18	-	-	-	-	-	-
W-809-01	09/02/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-809-02	3/25/08	E601	0 of 18	-	-	-	-	-	-
W-809-03	3/20/08	E601	0 of 18	-	-	-	-	-	-
W-809-04	3/11/08	E601	0 of 18	-	-	-	-	-	-
W-810-01	3/25/08	E601	0 of 18	-	-	-	-	-	-
W-810-01	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-814-01	3/20/08	E601	1 of 18	1	-	-	-	-	-
W-814-01	03/20/08 DUP	E601	1 of 18	1.2	-	-	-	-	-
W-814-01	8/26/08	E601	1 of 18	1.2	-	-	-	-	-
W-814-02	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-814-02	8/26/08	E601	0 of 18	-	-	-	-	-	-
W-814-04	1/28/08	E601	0 of 18	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
W-814-04	5/7/08	E601	0 of 18	-	-	-	-	-	-
W-814-04	8/21/08	E601	0 of 18	-	-	-	-	-	-
W-814-04	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-814-2138	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-814-2138	11/24/08	E624	0 of 30	-	-	-	-	-	-
W-815-02	1/9/08	E601	0 of 18	-	-	-	-	-	-
W-815-02	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-815-04	1/9/08	E601	0 of 18	-	-	-	-	-	-
W-815-04	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-815-05	2/27/08	E601	0 of 18	-	-	-	-	-	-
W-815-05	9/11/08	E601	0 of 18	-	-	-	-	-	-
W-815-06	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-815-06	02/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-815-06	8/26/08	E601	0 of 18	-	-	-	-	-	-
W-815-06	08/26/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-815-07	2/26/08	E601	0 of 18	-	-	-	-	-	-
W-815-07	8/26/08	E601	0 of 18	-	-	-	-	-	-
W-815-08	3/25/08	E601	0 of 18	-	-	-	-	-	-
W-815-08	6/11/08	E601	0 of 18	-	-	-	-	-	-
W-815-08	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-815-08	11/24/08	E601	0 of 18	-	-	-	-	-	-
W-815-1928	3/17/08	E601	3 of 18	-	1.1	1.7	-	1.9	-
W-815-1928	9/3/08	E601	1 of 18	-	0.6	-	-	-	-
W-815-2217	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-815-2217	9/22/08	E601	0 of 18	-	-	-	-	-	-
W-817-01	1/14/08	E601	0 of 18	-	-	-	-	-	-
W-817-01	4/1/08	E601	0 of 18	-	-	-	-	-	-
W-817-01	7/8/08	E601	0 of 18	-	-	-	-	-	-
W-817-01	10/13/08	E601	0 of 18	-	-	-	-	-	-
W-817-03	1/14/08	E601	0 of 18	-	-	-	-	-	-
W-817-03	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-817-03	10/6/08	E601	0 of 18	-	-	-	-	-	-
W-817-03A	3/13/08	E601	0 of 18	-	-	-	-	-	-
W-817-03A	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-817-03A	09/03/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-817-04	3/5/08	E601	0 of 18	-	-	-	-	-	-
W-817-05	3/17/08	E601	0 of 18	-	-	-	-	-	-
W-817-05	9/4/08	E601	0 of 18	-	-	-	-	-	-
W-817-07	3/17/08	E601	0 of 18	-	-	-	-	-	-
W-817-07	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-818-01	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-818-01	8/26/08	E601	0 of 18	-	-	-	-	-	-
W-818-01	08/26/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-818-03	2/26/08	E601	0 of 18	-	-	-	-	-	-
W-818-03	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-818-04	2/12/08	E601	0 of 18	-	-	-	-	-	-
W-818-04	8/20/08	E601	0 of 18	-	-	-	-	-	-
W-818-06	2/12/08	E601	0 of 18	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
W-818-06	02/12/08 DUP	E601	0 of 18	-	-	-	-	-	-
W-818-06	8/20/08	E601	0 of 18	-	-	-	-	-	-
W-818-07	2/12/08	E601	0 of 18	-	-	-	-	-	-
W-818-07	8/20/08	E601	0 of 18	-	-	-	-	-	-
W-818-08	1/29/08	E601	0 of 18	-	-	-	-	-	-
W-818-08	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-818-09	1/29/08	E601	0 of 18	-	-	-	-	-	-
W-818-09	7/10/08	E601	0 of 18	-	-	-	-	-	-
W-818-11	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-818-11	8/26/08	E601	0 of 18	-	-	-	-	-	-
W-819-02	1/30/08	E601	0 of 18	-	-	-	-	-	-
W-819-02	8/21/08	E601	0 of 18	-	-	-	-	-	-
W-823-01	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-01	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-02	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-02	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-03	2/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-03	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-823-13	3/20/08	E601	0 of 18	-	-	-	-	-	-
W-823-13	8/19/08	E601	0 of 18	-	-	-	-	-	-
W-827-05	2/26/08	E601	0 of 18	-	-	-	-	-	-
W-827-05	9/22/08	E601	0 of 18	-	-	-	-	-	-
W-829-06	2/13/08	E601	0 of 18	-	-	-	-	-	-
W-829-06	6/10/08	E601	0 of 18	-	-	-	-	-	-
W-829-06	7/8/08	E601	0 of 18	-	-	-	-	-	-
W-829-15	4/17/08	E624	0 of 30	-	-	-	-	-	-
W-829-15	04/17/08 DUP	E624	0 of 30	-	-	-	-	-	-
W-829-1938	1/17/08	E624	0 of 30	-	-	-	-	-	-
W-829-1938	01/17/08 DUP	E624	0 of 30	-	-	-	-	-	-
W-829-1938	4/16/08	E624	0 of 30	-	-	-	-	-	-
W-829-1938	7/17/08	E624	0 of 30	-	-	-	-	-	-
W-829-1938	07/17/08 DUP	E624	0 of 30	-	-	-	-	-	-
W-829-1938	10/9/08	E624	0 of 30	-	-	-	-	-	-
W-829-1938	10/09/08 DUP	E624	0 of 30	-	-	-	-	-	-
W-829-1940	1/29/08	E601	0 of 18	-	-	-	-	-	-
W-829-1940	9/3/08	E601	0 of 18	-	-	-	-	-	-
W-829-1940	9/3/08	E624	0 of 30	-	-	-	-	-	-
W-829-1940	12/2/08	E624	0 of 30	-	-	-	-	-	-
W-829-22	4/21/08	E624	0 of 30	-	-	-	-	-	-
WELL18	1/9/08	E601	0 of 18	-	-	-	-	-	-
WELL18	01/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	2/13/08	E601	0 of 18	-	-	-	-	-	-
WELL18	02/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	3/12/08	E601	0 of 18	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
WELL18	03/12/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	4/9/08	E601	0 of 18	-	-	-	-	-	-
WELL18	04/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	5/14/08	E601	0 of 18	-	-	-	-	-	-
WELL18	05/14/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	6/11/08	E601	0 of 18	-	-	-	-	-	-
WELL18	06/11/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	7/9/08	E601	0 of 18	-	-	-	-	-	-
WELL18	07/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	8/13/08	E601	0 of 18	-	-	-	-	-	-
WELL18	08/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	9/10/08	E601	0 of 18	-	-	-	-	-	-
WELL18	09/10/08 DUP	E601	1 of 18	-	-	-	0.9	-	-
WELL18	10/8/08	E601	0 of 18	-	-	-	-	-	-
WELL18	10/08/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	11/12/08	E601	0 of 18	-	-	-	-	-	-
WELL18	11/12/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL18	12/9/08	E601	0 of 18	-	-	-	-	-	-
WELL18	12/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL20	1/9/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	01/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	01/09/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL20	2/13/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	02/13/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	02/13/08 DUP	E601	0 of 18	-	-	-	-	-	-
WELL20	3/12/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	03/12/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	4/9/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	04/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	5/14/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	05/14/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	6/11/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	7/9/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	07/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCEe (total) (µg/L)	Bromodichloro-methane (µg/L)	Bromoform (µg/L)	Chloro-methane (µg/L)	Dibromo-chloro-methane (µg/L)	Methylene chloride (µg/L)
WELL20	8/13/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	08/13/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	9/10/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	09/10/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	10/8/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	10/08/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	11/12/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	11/12/08 DUP	E502.2	0 of 45	-	-	-	-	-	-
WELL20	12/9/08	E502.2	0 of 46	-	-	-	-	-	-
WELL20	12/09/08 DUP	E502.2	0 of 45	-	-	-	-	-	-

B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-815-2110	2/19/08	0.71	<4
W-815-2110	8/19/08	<0.5	<4
W-815-2111	2/19/08	<0.5	<4
W-815-2111	8/19/08	<0.5	<4
W-817-2318	3/13/08	150 D	17
W-817-2318	7/10/08	140 D	16 D
GALLO1	1/9/08	<0.5	<4
GALLO1	01/09/08 DUP	<0.5	<4
GALLO1	2/13/08	<0.5	<4
GALLO1	02/13/08 DUP	<0.5	<4
GALLO1	3/12/08	<0.5	<4
GALLO1	03/12/08 DUP	<0.5 L	<4
GALLO1	4/9/08	<0.5	<4
GALLO1	04/09/08 DUP	<0.5	<4
GALLO1	5/14/08	<0.5	<4 O
GALLO1	05/14/08 DUP	<0.5	<4
GALLO1	6/11/08	<0.5	<4
GALLO1	06/11/08 DUP	<0.5	<4
GALLO1	7/9/08	<0.5	<4
GALLO1	07/09/08 DUP	<0.5 L	<4 L
GALLO1	8/13/08	<0.44	<4
GALLO1	08/13/08 DUP	<0.5	<4
GALLO1	9/10/08	<0.5	<4
GALLO1	09/10/08 DUP	<0.5 L	<4
GALLO1	10/8/08	<0.5	<4
GALLO1	10/08/08 DUP	<0.5	<4
GALLO1	11/11/08	<0.5	<4
GALLO1	11/11/08 DUP	<0.5	<4 L
GALLO1	12/9/08	<0.5	<4
GALLO1	12/09/08 DUP	<0.5	<4
W-35B-01	2/7/08	<0.5	<4
W-35B-01	8/18/08	<0.5	<4
W-35B-02	2/7/08	24	<4
W-35B-02	8/18/08	8.7	<4
W-35B-03	2/7/08	1.8	<4
W-35B-03	8/18/08	0.97	<4
W-35B-04	2/7/08	1.3	<4
W-35B-04	8/18/08	0.61	<4
W-35B-05	2/7/08	1.2	<4
W-35B-05	8/18/08	1.2	<4
W-35C-01	2/19/08	1.3	<4
W-35C-02	1/30/08	<0.5	<4
W-35C-04	1/14/08	<0.5	<4
W-35C-05	1/17/08	2.6	<4
W-35C-06	1/17/08	7.6	<4
W-35C-07	1/7/08	<0.5	<4
W-35C-07	01/07/08 DUP	<0.5	<4
W-35C-08	1/7/08	0.89	<4
W-4A	3/20/08	0.91 L	<4
W-4A	03/20/08 DUP	1.3 L	<4
W-4AS	3/20/08	1.8 L	<4
W-4B	2/26/08	<0.5 L	<4
W-4C	2/26/08	<0.5 L	<4
W-4C	9/3/08	<0.5	<4
W-6BD	2/25/08	1.8	<4
W-6BS	2/25/08	18	<4
W-6CD	1/30/08	<0.5	<4
W-6CI	1/30/08	<0.5	<4
W-6CS	1/30/08	610 D	<4
W-6EI	1/28/08	<0.5 L	<4

B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-6ER	1/14/08	<0.5	<4
W-6ES	1/28/08	7.7 L	<4
W-6F	1/30/08	1.1	<4
W-6G	1/30/08	13	<4
W-6H	2/19/08	<0.5	<4
W-6H	8/19/08	<0.5	<4
W-6I	2/19/08	1.1	<4
W-6J	2/19/08	<0.5	<4
W-6J	8/19/08	<0.5	<4
W-6K	1/29/08	9.6	<4
W-6K	01/29/08 DUP	9.1	<4
W-6L	1/29/08	16	<4
W-6L	01/29/08 DUP	15	<4
W-808-01	1/31/08	82 DL	<4
W-808-03	3/25/08	<0.5 L	<4
W-809-01	3/11/08	87 D	<4
W-809-02	3/25/08	-	11
W-809-02	9/2/08	-	12
W-809-03	3/20/08	-	9.1
W-809-03	9/2/08	-	8.5
W-809-04	3/11/08	1.3	<4
W-810-01	3/25/08	<0.5 L	<4
W-814-01	3/20/08	54 DL	5
W-814-01	03/20/08 DUP	62	6.1
W-814-02	2/13/08	75 D	<4
W-814-04	1/28/08	<0.5 L	<4
W-814-04	8/21/08	1.4	<4
W-814-2138	2/13/08	78 D	5.1
W-815-02	1/9/08	98 D	12
W-815-04	1/9/08	100 D	4.3
W-815-05	2/27/08	83 DL	5.2
W-815-06	2/13/08	87 D	6.8
W-815-06	02/13/08 DUP	90 D	9.1 L
W-815-07	2/26/08	81 DL	5.6
W-815-08	3/25/08	<0.5 L	<4
W-815-08	9/3/08	<0.5	<4
W-815-1928	3/17/08	39 D	<4
W-815-2217	1/30/08	<0.5	<4
W-817-01	1/14/08	81	25 D
W-817-01	4/1/08	81	29 D
W-817-01	7/8/08	91 L	<4
W-817-01	10/13/08	81	28 D
W-817-03	1/14/08	92 D	25 D
W-817-03A	3/13/08	140 DL	13
W-817-04	3/5/08	78	19
W-817-05	3/17/08	1.4	<4
W-817-07	3/17/08	81 D	13
W-818-01	2/13/08	78 D	6.2
W-818-03	2/26/08	44 DL	<4
W-818-04	2/12/08	<0.5	<4
W-818-06	2/12/08	41 D	<4
W-818-06	02/12/08 DUP	41	<4
W-818-07	2/12/08	1.2	<4
W-818-08	1/29/08	80	7.8
W-818-09	1/29/08	84	6.6
W-818-11	2/13/08	75 D	6.8
W-819-02	1/30/08	<0.5	<4
W-823-01	2/19/08	15 D	<4
W-823-02	2/19/08	<0.5	<4
W-823-03	2/19/08	30 D	<4

B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-823-13	3/20/08	38 DL	<4
W-827-05	2/26/08	<0.5	<4
W-829-06	2/13/08	82 D	9.6
W-829-06	6/10/08	81 D	9.5
W-829-06	7/8/08	85 DL	9.6
W-829-15	4/17/08	-	<4
W-829-15	04/17/08 DUP	-	<4
W-829-1938	1/17/08	-	<4
W-829-1938	01/17/08 DUP	-	<4
W-829-1938	4/16/08	-	<4
W-829-1938	7/17/08	-	<4
W-829-1938	07/17/08 DUP	-	<4
W-829-1938	10/9/08	-	<4
W-829-1938	10/09/08 DUP	-	<4
W-829-1940	1/29/08	38 D	<4
W-829-22	4/21/08	-	<4
WELL18	1/9/08	<0.5	<4
WELL18	01/09/08 DUP	<0.5	<4
WELL18	2/13/08	<0.5	<4
WELL18	02/13/08 DUP	<0.5	<4
WELL18	3/12/08	<0.5	<4
WELL18	03/12/08 DUP	<0.5 L	<4
WELL18	4/9/08	<0.5	<4
WELL18	04/09/08 DUP	<0.5	<4
WELL18	5/14/08	<0.5	<4 O
WELL18	05/14/08 DUP	<0.5	<4
WELL18	6/11/08	<0.5	<4
WELL18	06/11/08 DUP	<0.5	<4
WELL18	7/9/08	<1 D	<4
WELL18	07/09/08 DUP	<0.5 L	<4 L
WELL18	8/13/08	<0.44	<4
WELL18	08/13/08 DUP	<0.5	<4
WELL18	9/10/08	<0.5	<4
WELL18	09/10/08 DUP	<0.5 L	<4
WELL18	10/8/08	<0.5	<4
WELL18	10/08/08 DUP	<0.5	<4
WELL18	11/12/08	<0.5	<4
WELL18	11/12/08 DUP	<0.5	<4 L
WELL18	12/9/08	<0.5	<4
WELL18	12/09/08 DUP	<0.5	<4
WELL20	1/9/08	<0.5	<4
WELL20	01/09/08 DUP	<0.5	<4
WELL20	2/13/08	<0.5	<4
WELL20	02/13/08 DUP	<0.5	<4
WELL20	3/12/08	<0.5	<4
WELL20	03/12/08 DUP	<0.5 L	<4
WELL20	4/9/08	<0.5	<4
WELL20	04/09/08 DUP	<0.5	<4
WELL20	5/14/08	<0.5	<4 O
WELL20	05/14/08 DUP	<0.5	<4
WELL20	6/11/08	<0.5	<4
WELL20	06/11/08 DUP	<0.5	<4
WELL20	7/9/08	<0.5	<4
WELL20	07/09/08 DUP	<0.5 L	<4 L
WELL20	8/13/08	<0.44	<4
WELL20	08/13/08 DUP	<0.5	<4
WELL20	9/10/08	<0.5	<4
WELL20	09/10/08 DUP	<0.5 L	<4
WELL20	10/8/08	<0.5	<4
WELL20	10/08/08 DUP	<0.5	<4

B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
WELL20	11/12/08	<0.5	<4
WELL20	11/12/08 DUP	<0.5	<4 L
WELL20	12/9/08	<0.5	<4
WELL20	12/09/08 DUP	<0.5	<4

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
GALLO1	1/9/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
GALLO1	01/09/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
GALLO1	2/13/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
GALLO1	02/13/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
GALLO1	3/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
GALLO1	03/12/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
GALLO1	4/9/08	LR	<1	LR	<1	<2	<1	<2	<2	<2	<2	<1	<1	<1
GALLO1	04/09/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
GALLO1	5/14/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	05/14/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
GALLO1	6/11/08	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 J	<2	<1
GALLO1	06/11/08 DUP	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR
GALLO1	7/9/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77	<1.5	<0.77
GALLO1	07/09/08 DUP	<1	<2	<2	<2	<2	<2	<2	<2	R	<2	<1	<2	R
GALLO1	8/13/08	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.89	<1.8	<0.89
GALLO1	08/13/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	9/10/08	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.68	<1.4	<0.68
GALLO1	09/10/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	10/8/08	<1.5	<1.5	<1.5 O	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77 O	<1.5	<0.77 O
GALLO1	10/08/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	11/11/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	11/11/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	12/9/08	<1.8 L	<1.8 L	<1.8 L	<1.8 L	<1.8	<1.8 L	<1.8	<1.8	<1.8	<1.8	<0.88	<1.8	<0.88
GALLO1	12/09/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-01	2/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35B-01	8/18/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-02	2/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35B-02	8/18/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-03	2/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35B-03	8/18/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-04	2/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35B-04	8/18/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-05	2/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35B-05	8/18/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35C-01	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-02	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-04	1/14/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-05	1/17/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-35C-06	1/17/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-07	1/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-07	01/07/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-35C-08	1/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-4A	3/20/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1 LO
W-4A	03/20/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1 LO
W-4AS	3/20/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1 LO
W-4B	2/26/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6BD	2/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6BS	2/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6CD	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6CI	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6CS	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6EI	1/28/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6ER	1/14/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6ES	1/28/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6F	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6G	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6H	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6H	8/19/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6I	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6J	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6J	8/19/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6K	1/29/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6K	01/29/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6L	1/29/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-6L	01/29/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-808-01	1/31/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-808-03	3/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-809-01	3/11/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-809-03	3/20/08	<1	<5	<5	<5	<5	<5	<5	<5	<10 D	<5	1.4	<5	99 DLO
W-809-04	3/11/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-810-01	3/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-814-01	3/20/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1 LO
W-814-01	03/20/08 DUP	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
W-814-02	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-814-2138	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-815-02	1/9/08	-	-	-	-	-	-	-	-	-	-	<1	-	67
W-815-04	1/9/08	-	-	-	-	-	-	-	-	-	-	<1	-	72
W-815-05	2/27/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-815-06	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	8.7
W-815-06	02/13/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	12
W-815-07	2/26/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	1.3
W-815-08	3/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-815-08	9/3/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-1928	3/17/08	-	-	-	-	-	-	-	-	-	-	<1	-	19
W-815-2110	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-815-2110	8/19/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-2111	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-815-2111	8/19/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-2217	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-817-01	1/14/08	-	-	-	-	-	-	-	-	-	-	19	-	42
W-817-01	4/1/08	<0.83	<0.83	<0.83	<0.83	<1.7	<0.83	<1.7	<1.7	<1.7	<1.7	19	6.2	48
W-817-01	7/8/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	110 S	<2	<0.65 S
W-817-01	10/13/08	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	18	<1.3	48 O
W-817-03	1/14/08	-	-	-	-	-	-	-	-	-	-	<1	-	9.3
W-817-03A	3/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-817-04	3/5/08	-	-	-	-	-	-	-	-	-	-	1.1	-	3.4
W-817-05	3/17/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-817-07	3/17/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-817-2318	3/13/08	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
W-817-2318	7/10/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.73	<1.5	<0.73
W-818-01	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-818-03	2/26/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
W-818-04	2/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-818-06	2/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-818-06	02/12/08 DUP	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
W-818-07	2/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-818-08	1/29/08	-	-	-	-	-	-	-	-	-	-	<1 IJ	-	<1 IJ
W-818-09	1/29/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-818-11	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	16
W-819-02	1/30/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-823-01	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-823-02	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-823-03	2/19/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-823-13	3/20/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1 LO
W-827-05	2/26/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-829-06	6/10/08	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 J	<2	<1
W-829-15	4/17/08	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1
W-829-15	04/17/08 DUP	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1
W-829-1938	1/17/08	-	-	<5 D	<5	<5	-	-	-	-	-	<1 D	<5 L	<1 D
W-829-1938	01/17/08 DUP	-	-	<5 D	<5	<5	-	-	-	-	-	<1 D	<5 L	<1 D
W-829-1938	4/16/08	-	-	<5	<5 J	<5	-	-	-	-	-	<1 IJ	<5	<1 IJ
W-829-1938	7/17/08	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1
W-829-1938	07/17/08 DUP	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1
W-829-1938	10/9/08	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1 O
W-829-1938	10/09/08 DUP	-	-	<5	<5	<5	-	-	-	-	-	<1	<5	<1 O
W-829-1940	1/29/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
W-829-1940	9/3/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.86	<1.7	<0.86

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-829-22	4/21/08	-	-	<5 IJ	<5	<5	-	-	-	-	-	<1 IJ	<5	<1 IJ
WELL18	1/9/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
WELL18	01/09/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL18	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL18	02/13/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL18	3/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL18	03/12/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL18	4/9/08	DLR	<1 D	DLR	<1 D	<2 D	<1 D	<2 D	<2 D	<2 D	<2 D	<1 D	<1 D	<1 D
WELL18	04/09/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
WELL18	5/14/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	05/14/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
WELL18	6/11/08	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 J	<2	<1
WELL18	06/11/08 DUP	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR
WELL18	7/9/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	07/09/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	R	<2	<1	<2	R
WELL18	8/13/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	08/13/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	9/10/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.74	<1.5	<0.74
WELL18	09/10/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	10/8/08	<1.6	<1.6	<1.6 O	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.81 O	<1.6	<0.81 O
WELL18	10/08/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	11/12/08	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<0.67	<1.3	<0.67
WELL18	11/12/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	12/9/08	<2 DL	<2 DL	<2 DL	<2 DL	<2 D	<2 DL	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
WELL18	12/09/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	1/9/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
WELL20	01/09/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL20	2/13/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL20	02/13/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL20	3/12/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL20	03/12/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
WELL20	4/9/08	DLR	<1 D	DLR	<1 D	<2 D	<1 D	<2 D	<2 D	<2 D	<2 D	<1 D	<1 D	<1 D
WELL20	04/09/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
WELL20	5/14/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
WELL20	05/14/08 DUP	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
WELL20	6/11/08	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 J	<2	<1
WELL20	06/11/08 DUP	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR
WELL20	7/9/08	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.8	<1.6	<0.8
WELL20	07/09/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	R	<2	<1	<2	R
WELL20	8/13/08	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
WELL20	08/13/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	9/10/08	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.72	<1.4	<0.72
WELL20	09/10/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	10/8/08	<1.5	<1.5	<1.5 O	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77 O	<1.5	<0.77 O
WELL20	10/08/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	11/12/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.76	<1.5	<0.76
WELL20	11/12/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	12/9/08	<1.8 L	<1.8 L	<1.8 L	<1.8 L	<1.8	<1.8 L	<1.8	<1.8	<1.8	<1.8	<0.9	<1.8	<0.9
WELL20	12/09/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.4. High Explosives Process Area Operable Unit general minerals in ground water.

Constituents of concern	W-829-1940 9/3/08	W-829-1940 12/2/08
Total Alkalinity (as CaCO3) (mg/L)	470	450
Aluminum (mg/L)	<0.2	<0.05
Bicarbonate Alk (as CaCO3) (mg/L)	430 D	450 D
Calcium (mg/L)	46	41
Carbonate Alk (as CaCO3) (mg/L)	34 D	<10 D
Chloride (mg/L)	380 D	350
Copper (mg/L)	<0.05	<0.01
Fluoride (mg/L)	0.5 D	0.72 H
Hydroxide Alk (as CaCO3) (mg/L)	<10 D	<10 D
Iron (mg/L)	<0.1	<0.05
Magnesium (mg/L)	42	37
Manganese (mg/L)	<0.03	<0.01
Nickel (mg/L)	<0.1	<0.01
Nitrate (as N) (mg/L)	12 D	12 D
Nitrate (as NO3) (mg/L)	52	55 H
Nitrite (as N) (mg/L)	<0.5	<0.5
pH (Units)	8.13 H	8.03 H
Ortho-Phosphate (mg/L)	0.28	0.26
Total Phosphorus (as P) (mg/L)	0.078 H	0.086 H
Potassium (mg/L)	26	25
Sodium (mg/L)	470	440 O
Total dissolved solids (TDS) (mg/L)	1,600 DH	1,600 DH
Specific Conductance (μmhos/cm)	2,490	2,420 H
Sulfate (mg/L)	280 D	270 H
Surfactants (mg/L)	<0.5	<0.5
Total Hardness (as CaCO3) (mg/L)	290	260
Zinc (mg/L)	<0.05	<0.01

B-4.5. High Explosives Process Area Operable Unit uranium isotopes by mass spectrometry in ground water.

Location	Date	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
W-814-2138	11/24/08	20.2 B	<312	<312 E	0.400 ± 0.0404 B	<3.2	9.80 ± 1.14 B

B-4.6. High Explosives Process Area Operable Unit metals and silica in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silica (as SiO2) (mg/L)	Silver (mg/L)	Sodium (mg/L)
W-814-2138	11/24/08	-	-	-	-	-	-	-	-	-	-	27	-	-
W-829-15	4/17/08	-	-	-	-	<0.05	-	<0.01 BE	-	29	-	-	-	170 O
W-829-15	04/17/08 DUP	-	-	-	-	<0.05	-	<0.01 BE	-	31	-	-	-	160 O
W-829-1938	1/17/08	-	-	-	-	<0.05 E	-	0.055	-	12	-	-	-	160 B
W-829-1938	01/17/08 DUP	-	-	-	-	<0.05 E	-	0.051	-	12	-	-	-	160 B
W-829-1938	4/16/08	-	-	-	-	<0.05 E	-	0.054	-	13	-	-	-	160
W-829-1938	7/17/08	-	-	-	-	<0.05 E	-	<0.01 E	-	12 B	-	-	-	150 B
W-829-1938	07/17/08 DUP	-	-	-	-	<0.05 E	-	<0.01 E	-	13 B	-	-	-	160 B
W-829-1938	10/9/08	-	-	-	-	<0.05 E	-	0.011	-	12 B	-	-	-	150 B
W-829-1938	10/09/08 DUP	-	-	-	-	<0.05	-	<0.01 E	-	12	-	-	-	150
W-829-1940	9/3/08	<0.05	<0.025	<0.001	<0.001	-	<0.005	-	<0.0002	-	0.13	18	<0.001	-
W-829-1940	12/2/08	<0.05	<0.025	<0.001	0.0011	-	<0.005	-	<0.0002	-	0.14	17	<0.001	-
W-829-22	4/21/08	-	-	-	-	<0.05	-	<0.01 EF	-	9.6	-	-	-	230 B
WELL20	1/9/08	-	-	-	-	-	-	-	-	9	-	-	-	-
WELL20	01/09/08 DUP	-	-	-	-	-	-	-	-	15 L	-	-	-	-

B-4.7. High Explosives Process Area Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel (µg/L)	Oil (µg/L)
W-823-02	8/19/08	<50	<200

B-4.8. High Explosives Process Area Operable Unit anions in ground water.

Location	Date	Bromide (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Nitrite (as N) (mg/L)	Nitrite (as NO2) (mg/L)	Ortho-Phosphate (mg/L)	Sulfate (mg/L)
W-829-15	4/17/08	0.33	89	0.19	<0.5 E	1.1	<0.5	<0.5	0.07	180
W-829-15	04/17/08 DUP	0.35	88	0.18	<0.5 E	1.4	<0.5	<0.5	0.063	180
W-829-1938	1/17/08	0.66	95 F	0.39	0.71	3.1 H	<0.5 E	<0.5 EH	0.17	180
W-829-1938	01/17/08 DUP	0.23	95 F	0.31	0.69	3.1 H	<0.5 E	<0.5 EH	0.17	180
W-829-1938	4/16/08	0.38	96	0.26	<0.5 E	1.5	<0.5 E	<0.5 E	0.21	190
W-829-1938	7/17/08	0.64	95 B	0.32	0.78	3.5 H	<0.5 E	<0.5 EH	0.25	190
W-829-1938	07/17/08 DUP	0.83	95 B	0.38	0.73	3.2 H	<0.5 E	<0.5 EH	0.25	190
W-829-1938	10/9/08	1.1	100 F	0.24	0.65	2.9 H	<0.5 E	0.19 H	0.26	200
W-829-1938	10/09/08 DUP	0.84	100 F	0.22	0.88	3.9 H	<0.5 E	0.18 H	0.26	200
W-829-22	4/21/08	0.43	110 F	0.3	<0.5	<0.44	<0.5	<0.17	0.12	170

B-4.9. High Explosives Process Area Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-815-2110	12/10/08	<10
W-815-2111	12/10/08	<10
W-815-2111	12/10/08 DUP	<10 D
W-814-2138	11/24/08	<10
W-815-2217	12/9/08	<10 L
W-829-1940	9/3/08	<10 D
W-829-1940	12/2/08	<10 D

B-5.1. Building 850 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-850-2313	2/5/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-850-2314	6/26/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-850-2416	2/25/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-850-2417	2/13/08	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
K1-01C	1/28/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-01C	5/6/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-01C	7/21/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-01C	10/27/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-01C	10/27/08 DUP	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	1/31/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	01/31/08 DUP	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	4/23/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	7/22/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	10/27/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-04	1/10/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-04	4/23/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-04	7/21/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-04	07/21/08 DUP	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-04	10/20/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-05	1/14/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
K1-05	4/23/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	19	<0.5
K1-05	7/21/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5
K1-05	10/16/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5
K1-07	1/24/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-07	4/24/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-07	04/24/08 DUP	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-07	7/22/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-07	10/16/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-08	1/29/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	24	<0.5
K1-08	4/24/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	26	<0.5
K1-08	7/22/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	31	<0.5
K1-08	10/14/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	27	<0.5
K1-09	1/7/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	46	<0.5
K1-09	4/24/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	39	<0.5
K1-09	7/22/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	56	<0.5
K1-09	10/14/08	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	44	<0.5
NC7-69	4/30/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-69	04/30/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-69	10/21/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-02	1/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-2209	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-2209	7/14/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-2209	07/14/08 DUP	E601	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<0.5 LO	<1 LO	<2 LO	<0.5 LO
W-865-1802	1/23/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-1802	7/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-1803	2/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-1803	7/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-5.1. Building 850 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-865-2005	3/25/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.1	<0.5
W-865-2005	4/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.5	<0.5
W-865-2005	7/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5
W-865-2005	07/15/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.2	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	Chloro-methane (µg/L)
W-850-2313	2/5/08	E624	0 of 30	-
W-850-2314	6/26/08	E624	0 of 30	-
W-850-2416	2/25/08	E624	0 of 30	-
W-850-2417	2/13/08	E624	0 of 30	-
K1-01C	1/28/08	E8260	0 of 36	-
K1-01C	5/6/08	E8260	0 of 36	-
K1-01C	7/21/08	E8260	0 of 36	-
K1-01C	10/27/08	E8260	0 of 36	-
K1-01C	10/27/08 DUP	E8260	0 of 36	-
K1-02B	1/31/08	E8260	0 of 36	-
K1-02B	01/31/08 DUP	E8260	0 of 36	-
K1-02B	4/23/08	E8260	0 of 36	-
K1-02B	7/22/08	E8260	0 of 36	-
K1-02B	10/27/08	E8260	0 of 36	-
K1-04	1/10/08	E8260	0 of 36	-
K1-04	4/23/08	E8260	0 of 36	-
K1-04	7/21/08	E8260	0 of 36	-
K1-04	07/21/08 DUP	E8260	0 of 36	-
K1-04	10/20/08	E8260	0 of 36	-
K1-05	1/14/08	E8260	0 of 36	-
K1-05	4/23/08	E8260	0 of 36	-
K1-05	7/21/08	E8260	0 of 36	-
K1-05	10/16/08	E8260	0 of 36	-
K1-07	1/24/08	E8260	0 of 36	-
K1-07	4/24/08	E8260	0 of 36	-
K1-07	04/24/08 DUP	E8260	0 of 36	-
K1-07	7/22/08	E8260	0 of 36	-
K1-07	10/16/08	E8260	0 of 36	-
K1-08	1/29/08	E8260	0 of 36	-
K1-08	4/24/08	E8260	0 of 36	-
K1-08	7/22/08	E8260	0 of 36	-
K1-08	10/14/08	E8260	0 of 36	-
K1-09	1/7/08	E8260	0 of 36	-
K1-09	4/24/08	E8260	0 of 36	-
K1-09	7/22/08	E8260	0 of 36	-
K1-09	10/14/08	E8260	0 of 36	-
NC7-69	4/30/08	E601	0 of 18	-
NC7-69	04/30/08 DUP	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	Chloro-methane (µg/L)
NC7-69	10/21/08	E601	1 of 18	1.4
W-PIT1-02	1/14/08	E601	0 of 22	-
W-PIT1-02	1/14/08	E602	0 of 8	-
W-PIT1-2209	1/31/08	E601	0 of 18	-
W-PIT1-2209	7/14/08	E601	0 of 18	-
W-PIT1-2209	07/14/08 DUP	E601	0 of 18	-
W-865-1802	1/23/08	E601	0 of 18	-
W-865-1802	7/15/08	E601	0 of 18	-
W-865-1803	2/12/08	E601	0 of 18	-
W-865-1803	7/16/08	E601	0 of 18	-
W-865-2005	3/25/08	E601	0 of 18	-
W-865-2005	3/25/08	E602	0 of 9	-
W-865-2005	4/7/08	E601	0 of 18	-
W-865-2005	7/15/08	E601	0 of 18	-
W-865-2005	7/15/08	E602	0 of 9	-
W-865-2005	07/15/08 DUP	E601	0 of 18	-
W-865-2005	07/15/08 DUP	E602	0 of 10	-

B-5.2. Building 850 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-850-2313	2/5/08	-	-	10
W-850-2313	8/12/08	-	-	15
W-850-2313	11/5/08	-	37	17 D
W-850-2314	6/26/08	-	<0.5	<4
W-850-2314	11/5/08	-	-	<4
W-850-2416	2/25/08	-	-	<4
W-850-2416	11/5/08	-	-	<4
W-850-2416	11/19/08	-	<0.5	-
W-850-2417	2/13/08	-	-	69 D
W-850-2417	11/5/08	-	-	79 D
K1-01C	1/28/08	-	35	<4 E
K1-01C	5/6/08	-	35	<4 E
K1-01C	7/21/08	-	35	<4 E
K1-01C	10/27/08	-	35	<4 E
K1-01C	10/27/08 DUP	-	34	<4 E
K1-02A	6/25/08	-	-	<4
K1-02B	1/31/08	-	35	7
K1-02B	01/31/08 DUP	-	35	7.3
K1-02B	4/23/08	-	35	6.8
K1-02B	7/22/08	-	36 H	6.7
K1-02B	10/27/08	-	36	6.5
K1-04	1/10/08	-	34	<4 E
K1-04	4/23/08	-	30	<4 E
K1-04	7/21/08	-	34	<4 E
K1-04	07/21/08 DUP	-	34	<4 E
K1-04	10/20/08	-	31 F	<4 E
K1-05	1/14/08	-	36	<4
K1-05	4/23/08	-	35	<4
K1-05	7/21/08	-	37	<4
K1-05	10/16/08	-	37	<4
K1-06	1/31/08	-	-	4.2
K1-06	4/8/08	-	33 D	5.2
K1-06	7/7/08	-	-	4.5 L
K1-06	10/1/08	-	-	4.7
K1-07	1/24/08	-	31	<4
K1-07	4/24/08	-	32	<4
K1-07	04/24/08 DUP	-	32	<4
K1-07	7/22/08	-	34 H	<4
K1-07	10/16/08	-	33	<4
K1-08	1/29/08	-	35	<4
K1-08	4/24/08	-	35	<4
K1-08	7/22/08	-	36 H	<4 E
K1-08	10/14/08	-	35	<4
K1-09	1/7/08	-	35	<4
K1-09	4/24/08	-	35	<4
K1-09	7/22/08	-	35	<4
K1-09	10/14/08	-	35	<4

B-5.2. Building 850 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K2-03	4/9/08	-	7.6	-
K2-04D	1/16/08	-	-	<4
K2-04D	4/22/08	-	32 D	4.2
K2-04D	04/22/08 DUP	-	32 D	<4 E
K2-04D	9/15/08	-	-	<4
K2-04D	10/1/08	-	-	<4
K2-04S	1/16/08	-	-	5
K2-04S	01/16/08 DUP	-	-	5.1
K2-04S	4/22/08	-	31 D	6.5
K2-04S	9/15/08	-	-	5.5
K2-04S	10/1/08	-	-	6
NC2-05	4/15/08	-	24 D	<4
NC2-05A	4/15/08	-	36 D	4.8
NC2-06	4/15/08	-	38	4.9
NC2-06A	4/16/08	-	<0.5	<4
NC2-09	4/15/08	-	<0.5	<4
NC2-10	5/20/08	-	73 D	<4
NC2-11D	5/1/08	-	25 D	-
NC2-11D	10/13/08	-	-	<4 E
NC2-11I	4/15/08	-	28 D	-
NC2-11I	10/8/08	-	-	<4
NC2-11S	4/15/08	-	33 D	-
NC2-11S	10/8/08	-	-	4.1
NC2-12D	4/17/08	-	26 L	4.3
NC2-12D	04/17/08 DUP	-	25 DL	<4
NC2-12I	4/17/08	-	<0.5 L	-
NC2-12I	10/8/08	-	-	5.5
NC2-12S	4/17/08	-	110 DL	-
NC2-12S	10/8/08	-	-	<4
NC2-13	2/27/08	-	-	<4
NC2-13	4/7/08	-	32 DHL	-
NC2-13	04/17/08 DUP	-	37	-
NC2-14S	2/20/08	-	-	<4
NC2-14S	02/20/08 DUP	-	-	<4
NC2-14S	4/21/08	-	30 D	-
NC2-14S	7/7/08	-	-	<4 L
NC2-14S	07/07/08 DUP	-	-	<4
NC2-15	4/21/08	-	30 D	<4
NC2-16	1/31/08	-	-	<4
NC2-16	4/21/08	-	0.73	-
NC2-16	7/7/08	-	-	<4 L
NC2-17	4/22/08	-	29	6.2
NC2-18	4/21/08	-	330 DS	8.5
NC2-18	04/21/08 DUP	-	39	10

B-5.2. Building 850 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC2-19	4/22/08	-	73 D	<4
NC2-20	4/14/08	-	28	<4
NC2-21	4/14/08	-	29	<4
NC7-10	3/3/08	-	-	16
NC7-10	4/23/08	-	37 DL	-
NC7-10	7/23/08	-	-	20
NC7-10	11/17/08	-	54	-
NC7-11	3/20/08	-	-	14
NC7-11	4/23/08	-	55 DL	-
NC7-11	7/23/08	-	-	17
NC7-15	4/23/08	-	29 DL	<4
NC7-19	4/29/08	-	29 L	<4
NC7-27	4/30/08	-	46 D	10
NC7-28	2/5/08	-	-	66
NC7-28	4/30/08	-	74 D	56
NC7-28	7/23/08	-	-	63
NC7-28	07/23/08 DUP	-	-	67 D
NC7-28	10/14/08	-	-	92
NC7-29	2/5/08	-	-	10
NC7-29	4/30/08	-	160 D	-
NC7-29	7/22/08	-	-	13
NC7-43	1/23/08	-	-	<4
NC7-43	5/1/08	-	<0.5	-
NC7-43	7/23/08	-	-	<4
NC7-44	5/1/08	-	61 D	<4
NC7-46	5/1/08	-	<0.5	-
NC7-46	7/22/08	-	-	<4
NC7-54	5/5/08	-	24 DL	-
NC7-54	7/23/08	-	-	14
NC7-56	3/20/08	-	-	6.2
NC7-56	5/6/08	-	23 DL	-
NC7-56	7/22/08	-	-	7.9
NC7-58	2/20/08	-	-	5
NC7-58	5/6/08	-	19 DL	-
NC7-58	7/21/08	-	-	6
NC7-59	3/26/08	-	-	6
NC7-59	5/6/08	-	22 DL	-
NC7-59	7/22/08	-	-	7.2
NC7-60	2/6/08	-	-	<4
NC7-60	5/7/08	-	<0.5	-
NC7-60	7/24/08	-	-	<4
NC7-61	4/23/08	-	66	-
NC7-61	04/23/08 DUP	-	58 DL	-
NC7-61	7/28/08	-	-	48
NC7-61	07/28/08 DUP	-	-	49
NC7-61	10/13/08	-	-	52 D
NC7-61	10/13/08 DUP	-	-	50 D

B-5.2. Building 850 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC7-61	11/17/08	-	63	-
NC7-62	5/7/08	-	36	-
NC7-62	10/21/08	-	-	7.6
NC7-69	4/30/08	-	<0.5	-
NC7-69	04/30/08 DUP	-	<0.5	-
NC7-70	2/26/08	-	-	43
NC7-70	5/8/08	-	21 D	-
NC7-70	7/24/08	-	-	37
NC7-71	3/20/08	-	-	<4
NC7-71	5/8/08	-	<0.5	<4
NC7-71	7/23/08	-	-	<4
NC7-71	10/21/08	-	-	<4
NC7-72	3/20/08	-	-	7.2
NC7-72	5/6/08	-	22 DL	-
NC7-72	05/06/08 DUP	-	28 DL	-
NC7-72	7/22/08	-	-	5.8
NC7-73	5/6/08	-	25 DL	-
NC7-73	10/20/08	-	-	7.3
NC7-76	5/8/08	-	25 D	<4
W-850-05	1/31/08	-	-	<4
W-850-05	5/8/08	-	<0.5	-
W-850-05	7/24/08	-	-	<4
W-850-2145	5/15/08	-	34	5.6
W-850-2315	5/15/08	-	86	11
W-850-2315	7/22/08	-	87	9.7
W-850-2315	10/23/08	-	-	11
W-PIT1-02	1/14/08	-	64 D	4.3
W-PIT1-02	7/17/08	-	-	4.4
W-PIT1-2209	1/31/08	-	32	<4
W-PIT1-2209	4/8/08	-	33	-
W-PIT1-2209	7/14/08	-	33	<4
W-PIT1-2209	07/14/08 DUP	7 D	-	<4
W-PIT1-2225	2/6/08	-	-	<4
W-PIT1-2225	4/9/08	-	<0.5	<4
W-PIT1-2225	7/8/08	-	-	<4
W-PIT1-2225	10/2/08	-	-	<4
W-PIT7-16	5/14/08	-	<0.5	-
W-865-1802	4/7/08	-	21 D	-
W-865-1803	4/7/08	-	30 D	<4
W-865-1803	11/5/08	-	-	<4 L
W-865-2005	3/25/08	-	31 DL	<4
W-865-2005	7/15/08	-	32 D	<4
W-865-2005	07/15/08 DUP	-	37	<4

B-5.3. Building 850 Operable Unit metals and silica in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silica (as SiO2) (mg/L)	Silver (mg/L)
W-850-2313	2/5/08	<0.05	<0.025	<0.001	<0.001	<0.005	<0.0002	<0.05 L	68 O	<0.001
W-850-2314	6/26/08	<0.05	<0.025	<0.001	<0.001	<0.005	<0.0002	<0.05	53	<0.001
W-850-2416	2/25/08	<0.002	0.033	<0.001	<0.001	<0.005	<0.0002	<0.05	27 O	<0.001
W-850-2417	2/13/08	<0.05	0.061	<0.001	0.0019	<0.005	<0.0002	<0.05	67	<0.001
W-PIT1-02	1/14/08	0.012	0.04	<0.0005	0.001	<0.005	<0.0002	0.0046	-	<0.001 L
W-865-2005	3/25/08	0.012	0.03 L	0.0006	<0.001	<0.005	<0.0002	0.0023	-	<0.001

B-5.4. Building 850 Operable Unit general minerals in ground water.

Constituents of concern	W-850-2313 2/5/08	W-850-2314 6/26/08	W-850-2416 2/25/08	W-850-2417 2/13/08
Total Alkalinity (as CaCO3) (mg/L)	220	170	160	240
Aluminum (mg/L)	<0.2	<0.2	<0.05	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	220 D	170	160	240 D
Calcium (mg/L)	46	52	46 O	64
Carbonate Alk (as CaCO3) (mg/L)	<5 D	<2.5	<2.5	<5 D
Chloride (mg/L)	48	40	-	46
Copper (mg/L)	<0.05	<0.05	<0.01	<0.05
Fluoride (mg/L)	0.53	0.41 O	0.29	0.35
Hydroxide Alk (as CaCO3) (mg/L)	<5 D	<2.5	<2.5	<5 D
Iron (mg/L)	<0.1	<0.1	<0.05	<0.1
Magnesium (mg/L)	20	21	20 O	28
Manganese (mg/L)	<0.03	<0.03	<0.03	<0.03
Nickel (mg/L)	<0.1	<0.1	<0.01	<0.1
Nitrate (as N) (mg/L)	4.9	<0.5	<0.5	19
Nitrate (as NO3) (mg/L)	22	<0.5 H	<0.5	84 H
Nitrite (as N) (mg/L)	<0.05	<0.5	<0.5	<0.5
pH (Units)	7.76	8.14 H	8	7.44
Ortho-Phosphate (mg/L)	0.45	0.15	<0.05	0.22
Total Phosphorus (as P) (mg/L)	0.14	0.053 H	<0.05 H	0.084
Potassium (mg/L)	3.2	3.8	5 O	4.6
Sodium (mg/L)	67	45	64 O	77
Total dissolved solids (TDS) (mg/L)	460 D	410 DH	400 D	540 D
Specific Conductance (µmhos/cm)	672	617 H	653	816 H
Sulfate (mg/L)	75	80	74 H	51
Surfactants (mg/L)	<0.5	<0.5	<0.5	<1 D
Total Hardness (as CaCO3) (mg/L)	200	220	200	280
Zinc (mg/L)	<0.05	<0.05	<0.01	<0.05 L

B-5.5. Building 850 Operable Unit uranium isotopes by mass spectrometry in ground and surface water.

Location	Date	Request	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
W-850-2313	2/5/08	ICMSRAD	3.80 ± 0.0390	-	2.20 ± 0.0380	0.0720 ± 0.000580	< 0.0003	1.60 ± 0.0110
W-850-2314	6/26/08	MS	0.069	< 312	< 312	< 0.11	< 3.2	0.0690 ± 0.00793
W-850-2416	2/25/08	ICMSRAD	< 0.0627	-	< 0.04	0.000340 ± 0.0000110	<0.000081	0.00890 ± 0.000260
W-850-2417	2/13/08	ICMSRAD	12.0 ± 0.100	-	3.00 ± 0.0860	0.140 ± 0.00130	0.0460 ± 0.000140	8.40 ± 0.0500
K1-01C	5/6/08	MS	3.50 D	< 1,560 BDL	< 312 DE	< 0.54 DE	< 3.2 D	1.50 ± 0.173 BDL
K1-02B	4/23/08	MS	5	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
K1-04	4/23/08	MS	2.6	< 312	< 312 E	< 0.11 E	< 3.2	0.650 ± 0.0748
K1-05	4/23/08	MS	3.5	< 312	< 312 E	< 0.11 E	< 3.2	0.940 ± 0.108
K1-06	4/8/08	MS	7.20 B	< 312	< 312 E	< 0.11 E	< 3.2	2.20 ± 0.253 B
K1-07	4/24/08	ICMSRAD	2.70 ± 0.0580	-	1.80 ± 0.0580	0.0380 ± 0.000300	< 0.00016	0.830 ± 0.00590
K1-07	4/24/08	MS	1.6	< 312	< 312 E	< 0.11 E	< 3.2	0.920 ± 0.106
K1-07	04/24/08 DUP	ICMSRAD	2.60 ± 0.0230	-	1.80 ± 0.0220	0.0390 ± 0.000390	< 0.00016	0.830 ± 0.00540
K1-07	04/24/08 DUP	MS	1.5	< 312	< 312 E	< 0.11 E	< 3.2	0.890 ± 0.102
K1-08	4/24/08	MS	1.6	< 312	< 312 E	< 0.11 E	< 3.2	0.950 ± 0.109
K1-09	4/24/08	MS	2.3	< 312	< 312 E	< 0.11 E	< 3.2	1.10 ± 0.126
K2-03	4/9/08	MS	8.20 B	< 312	< 312 E	0.130 ± 0.0147	< 3.2	3.00 ± 0.345 B
K2-04D	4/22/08	MS	3.7	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
K2-04D	04/22/08 DUP	MS	3.7	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
K2-04S	4/22/08	MS	3.3	< 312	< 312 E	< 0.11 E	< 3.2	1.30 ± 0.150
NC2-05	4/15/08	MS	11.2 BJ	< 312 BJ	< 312 E	0.190 ± 0.0215	< 3.2	4.80 ± 0.552 B
NC2-05A	4/15/08	MS	3.60 BJ	< 312 BJ	< 312 E	< 0.11 E	< 3.2	1.70 ± 0.196 B
NC2-06	4/15/08	MS	109 BJ	< 312 BEJ	< 312 E	< 0.11 E	< 3.2	0.920 ± 0.106 B
NC2-06	04/15/08 REA	MS	2.20 B	< 312	< 312 E	< 0.11 E	< 3.2	0.920 ± 0.118 B
NC2-06A	4/16/08	ICMSRAD	0.470 ± 0.0120	-	0.260 ± 0.0120	0.00740 ± 0.0000680	< 0.007	0.200 ± 0.000670
NC2-06A	4/16/08	MS	0.230 BJ	< 312 BJ	< 312	< 0.11 E	< 3.2	0.230 ± 0.0264 B
NC2-06A	10/7/08	ICMSRAD	0.420 ± 0.0160	-	0.240 ± 0.0160	0.00690 ± 0.0000890	< 0.00045	0.180 ± 0.00170
NC2-09	4/15/08	MS	0.0180 BJ	< 312 BJ	< 312	< 0.11	< 3.2	0.0180 ± 0.00207 B
NC2-10	5/20/08	MS	7	< 312	< 312 E	< 0.11 E	< 3.2	1.90 ± 0.218 B
NC2-11D	5/1/08	ICMSRAD	5.00 ± 0.0650	-	3.10 ± 0.0640	0.0860 ± 0.000650	< 0.00042	1.80 ± 0.00730
NC2-11D	10/13/08	ICMSRAD	5.10 ± 0.110	-	3.10 ± 0.110	0.0880 ± 0.000570	< 0.00037	1.90 ± 0.0110
NC2-11I	4/15/08	MS	3.60 BJ	< 312 BJ	< 312 E	< 0.11 E	< 3.2	1.60 ± 0.184 B
NC2-11S	4/15/08	MS	3.50 BJ	< 312 BJ	< 312 E	< 0.11 E	< 3.2	1.60 ± 0.184 B
NC2-12D	4/17/08	MS	3.3	< 312	< 312 E	< 0.11 E	< 3.2	1.40 ± 0.161
NC2-12D	04/17/08 DUP	MS	2.7	< 312	< 312 E	< 0.11 E	< 3.2	1.40 ± 0.161
NC2-12D	04/17/08 DUP	MS	3.3	< 312	< 312 E	< 0.11 E	< 3.2	1.40 ± 0.161
NC2-12D	10/8/08	MS	3.2	< 312	< 312 E	< 0.11 E	< 3.2	1.30 ± 0.151
NC2-12I	4/17/08	MS	2.1	< 312	< 312 E	< 0.11 E	< 3.2	0.780 ± 0.0897
NC2-12S	4/17/08	MS	6.6	< 312	< 312 E	< 0.11 E	< 3.2	2.10 ± 0.242

B-5.5. Building 850 Operable Unit uranium isotopes by mass spectrometry in ground and surface water.

Location	Date	Request	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
NC2-13	4/17/08	MS	5.8	< 312	< 312 E	< 0.11 E	< 3.2	1.90 ± 0.218
NC2-14S	4/21/08	MS	2.8	< 312	< 312 E	< 0.11 E	< 3.2	0.880 ± 0.101
NC2-15	4/21/08	MS	3.6	< 312	< 312 E	< 0.11 E	< 3.2	1.10 ± 0.126
NC2-16	4/21/08	MS	1.6	< 312	< 312 E	< 0.11 E	< 3.2	0.340 ± 0.0391
NC2-17	4/22/08	MS	4.4	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
NC2-18	4/21/08	MS	4	< 312	< 312 E	< 0.11 E	< 3.2	1.50 ± 0.173
NC2-19	4/22/08	MS	10.2	< 312	< 312 E	0.140 ± 0.0158	< 3.2	3.20 ± 0.368
NC2-20	4/14/08	MS	4.90 BJ	< 312 BJ	< 312 E	< 0.11 E	< 3.2	2.30 ± 0.264 B
NC2-21	4/14/08	MS	3.60 BJ	< 312 BJ	< 312 E	< 0.11 E	< 3.2	1.60 ± 0.184 B
NC7-10	4/23/08	ICMSRAD	2.70 ± 0.0230	-	1.60 ± 0.0230	0.0470 ± 0.000340	< 0.007	1.10 ± 0.00330
NC7-10	4/23/08	MS	3.7	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
NC7-11	4/23/08	MS	4.4	< 312	< 312 E	< 0.11 E	< 3.2	1.20 ± 0.138
NC7-15	4/23/08	MS	1	< 312	< 312	< 0.11 E	< 3.2	1.00 ± 0.115
NC7-19	4/29/08	MS	4.5	< 312	< 312 E	< 0.11 E	< 3.2	1.90 ± 0.218
NC7-27	4/30/08	MS	4.1	< 312	< 312 E	< 0.11 E	< 3.2	1.50 ± 0.173
NC7-28	2/5/08	ICMSRAD	21.0 ± 0.420	-	5.20 ± 0.410	0.250 ± 0.00150	0.0890 ± 0.0000460	16.0 ± 0.0500
NC7-28	4/30/08	ICMSRAD	15.0 ± 0.170	-	3.40 ± 0.140	0.170 ± 0.00170	0.0660 ± 0.000220	11.0 ± 0.0960
NC7-28	4/30/08	MS	16.3	< 312	< 312 E	0.160 ± 0.0181	< 3.2 E	11.0 ± 1.27
NC7-28	7/23/08	ICMSRAD	14.0 ± 0.240	-	3.20 ± 0.240	0.170 ± 0.00110	0.0620 ± 0.000120	11.0 ± 0.0400
NC7-28	10/14/08	MS	13.1 B	< 312	< 312 E	0.160 ± 0.0162 B	< 3.2 E	10.4 ± 1.21 B
NC7-29	4/30/08	MS	21.6	< 312	< 312 E	0.320 ± 0.0362	< 3.2	7.50 ± 0.862
NC7-43	5/1/08	MS	0.028	< 312	< 312	< 0.11	< 3.2	0.0280 ± 0.00322
NC7-44	5/1/08	MS	2.5	< 312	< 312 E	< 0.11 E	< 3.2	0.570 ± 0.0656
NC7-46	5/1/08	MS	0.65	< 312	< 312 E	< 0.11	< 3.2	0.0260 ± 0.00299
NC7-54	5/5/08	ICMSRAD	4.40 ± 0.120	-	2.40 ± 0.120	0.0780 ± 0.000760	< 0.007	2.00 ± 0.00930
NC7-54	5/5/08	MS	4.00 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.60 ± 0.299 BDL
NC7-56	5/6/08	MS	3.50 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.20 ± 0.253 BDL
NC7-58	5/6/08	MS	3.50 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.20 ± 0.253 BDL
NC7-59	5/6/08	MS	3.90 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.50 ± 0.288 BDL
NC7-60	5/7/08	MS	0.450 D	< 1,560 BDL	< 312 D	< 0.54 D	< 3.2 D	0.450 ± 0.0518 BDL
NC7-61	1/16/08	ICMSRAD	5.00 ± 0.0670	-	2.40 ± 0.0670	0.0720 ± 0.000540	0.00890 ± 0.0000220	2.60 ± 0.00590
NC7-61	4/23/08	ICMSRAD	5.30 ± 0.0780	-	2.40 ± 0.0770	0.0770 ± 0.000680	0.00990 ± 0.0000600	2.80 ± 0.0150
NC7-61	4/23/08	MS	6.9	< 312	< 312 E	< 0.11 E	< 3.2 E	3.00 ± 0.345
NC7-61	7/28/08	ICMSRAD	5.30 ± 0.0710	-	2.40 ± 0.0690	0.0770 ± 0.000610	0.00990 ± 0.0000130	2.80 ± 0.0130
NC7-61	07/28/08 DUP	ICMSRAD	5.60 ± 0.0550	-	2.60 ± 0.0520	0.0810 ± 0.00110	0.0100 ± 0.0000320	2.90 ± 0.0180
NC7-61	10/13/08	MS	5.40 B	< 312	< 312 E	< 0.11 E	< 3.2	2.90 ± 0.336 B
NC7-61	10/13/08 DUP	MS	4.90 B	< 312	< 312 E	< 0.11 E	< 3.2	2.90 ± 0.336 B
NC7-62	5/7/08	MS	3.70 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.40 ± 0.276 BDL
NC7-69	4/30/08	MS	< 0.017 E	< 312	< 312	< 0.11	< 3.2	< 0.017 E

B-5.5. Building 850 Operable Unit uranium isotopes by mass spectrometry in ground and surface water.

Location	Date	Request	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
NC7-69	04/30/08 DUP	MS	< 0.017 E	< 312	< 312	< 0.11	< 3.2	< 0.017 E
NC7-70	2/26/08	ICMSRAD	< 0.0627	-	< 0.025	0.000540 ± 0.0000230	< 0.00012	0.0130 ± 0.000150
NC7-70	5/8/08	ICMSRAD	2.10 ± 0.0610	-	1.40 ± 0.0610	0.0300 ± 0.000310	< 0.007	0.700 ± 0.00580
NC7-70	5/8/08	MS	1.5	< 312	< 312 E	< 0.11 E	< 3.2	0.840 ± 0.0966
NC7-70	7/24/08	ICMSRAD	2.20 ± 0.0230	-	1.40 ± 0.0230	0.0320 ± 0.000150	< 0.007	0.750 ± 0.00190
NC7-70	10/21/08	ICMSRAD	2.10 ± 0.0540	-	1.30 ± 0.0540	0.0310 ± 0.000320	< 0.007	0.720 ± 0.00470
NC7-70	10/21/08	MS	2.20 B	< 312	< 312 E	< 0.11 E	< 3.2	0.890 ± 0.103 B
NC7-71	3/20/08	ICMSRAD	< 0.0627	-	< 0.028	< 0.00018	<0.000055	0.00350 ± 0.0000830
NC7-71	5/8/08	MS	< 0.017 E	< 312	< 312	< 0.11	< 3.2	< 0.017 E
NC7-71	7/23/08	ICMSRAD	< 0.0627	-	< 0.018	< 0.00016	<0.000051	0.00300 ± 0.0000340
NC7-72	5/6/08	MS	3.80 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.50 ± 0.288 BDL
NC7-72	05/06/08 DUP	MS	4.00 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.70 ± 0.310 BDL
NC7-73	5/6/08	MS	4.30 D	< 1,560 BDL	< 312 D	< 0.54 DE	< 3.2 D	2.90 ± 0.334 BDL
NC7-76	5/8/08	MS	3.2	< 312	< 312 E	< 0.11 E	< 3.2	1.80 ± 0.207
W-850-05	5/8/08	MS	0.047	< 312	< 312	< 0.11	< 3.2	0.0470 ± 0.00540
W-850-05	10/23/08	ICMSRAD	0.110 ± 0.00550	-	0.0780 ± 0.00550	0.00150 ± 0.0000500	< 0.00011	0.0350 ± 0.000330
W-850-2312	10/23/08	ICMSRAD	2.10 ± 0.0490	-	1.40 ± 0.0490	0.0310 ± 0.000170	< 0.00018	0.650 ± 0.00250
W-850-2315	5/15/08	MS	15.9	< 312	< 312 E	0.280 ± 0.0316	< 3.2	6.30 ± 0.724 B
W-PIT1-2209	4/8/08	MS	2.10 B	< 312	< 312 E	< 0.11 E	< 3.2	0.810 ± 0.0932 B
W-PIT1-2209	10/27/08	MS	2.20 B	< 312	< 312 E	< 0.11 E	< 3.2	0.940 ± 0.109 B
W-PIT1-2225	4/9/08	MS	0.690 B	< 312	< 312 E	< 0.11	< 3.2	0.0650 ± 0.00748 B
W-PIT7-16	5/14/08	MS	0.100 D	< 623 D	< 312 D	< 0.22 D	< 3.2 D	0.100 ± 0.0115 BD
W-865-1802	4/7/08	MS	1.80 B	< 312	< 312 E	< 0.11 E	< 3.2	0.510 ± 0.0586 B
W-865-1803	4/7/08	MS	2.90 B	< 312	< 312 E	< 0.11 E	< 3.2	0.940 ± 0.108 B

B-5.6. Building 850 Operable Unit uranium and thorium isotopes by alpha spectrometry in ground water.

Location	Date	Thorium 228 (pCi/L)	Thorium 230 (pCi/L)	Thorium 232 (pCi/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
K1-01C	1/28/08	<0.25	<0.15	<0.15	1.80 ± 0.230	<0.1	0.781 ± 0.120
K1-01C	5/6/08	<0.25	<0.15	<0.15	2.51 ± 0.380	<0.1	1.13 ± 0.230
K1-01C	7/21/08	<0.25	<0.15	<0.15	2.53 ± 0.300	<0.1	1.27 ± 0.180
K1-01C	10/27/08	<0.25	<0.15	<0.15	2.80 ± 0.300	<0.1	1.39 ± 0.170
K1-01C	10/27/08 DUP	<0.25	0.154 ± 0.0520	<0.15	2.84 ± 0.310	0.108 ± 0.0460	1.40 ± 0.180
K1-02B	1/31/08	<0.25	<0.15	<0.15	1.95 ± 0.250	<0.1	1.15 ± 0.160
K1-02B	01/31/08 DUP	<0.25	<0.15	<0.15	2.24 ± 0.280	<0.1	1.10 ± 0.160
K1-02B	4/23/08	<0.25	<0.15	<0.15	2.12 ± 0.230	<0.1	1.23 ± 0.150
K1-02B	7/22/08	<0.25	<0.15	<0.15	2.16 ± 0.220	<0.1	1.16 ± 0.140
K1-02B	10/27/08	<0.25	0.153 ± 0.0520	<0.15	2.09 ± 0.240	0.116 ± 0.0440	1.22 ± 0.150
K1-04	1/10/08	<0.25	<0.15	<0.15	1.26 ± 0.170	<0.1	0.690 ± 0.110
K1-04	4/23/08	<0.25	<0.15	<0.15	1.23 ± 0.160	<0.1	0.645 ± 0.0990
K1-04	7/21/08	<0.25	<0.15	<0.15	1.30 ± 0.170	<0.1	0.633 ± 0.110
K1-04	07/21/08 DUP	<0.25	<0.15	<0.15	1.22 ± 0.150	<0.1	0.654 ± 0.0980
K1-04	10/20/08	<0.25	<0.15	<0.15	1.12 ± 0.160	<0.1	0.592 ± 0.100
K1-05	1/14/08	<0.25	<0.15	<0.15	1.92 ± 0.260	<0.1	0.962 ± 0.150
K1-05	4/23/08	<0.25	<0.15	<0.15	1.91 ± 0.210	<0.1	0.991 ± 0.130
K1-05	7/21/08	<0.25	<0.15	<0.15	1.77 ± 0.240	<0.1	0.858 ± 0.150
K1-05	10/16/08	<0.25	<0.15	<0.15	1.93 ± 0.270	<0.1	0.750 ± 0.150
K1-07	1/24/08	<0.25	<0.15	<0.15	1.95 ± 0.250	<0.1	0.908 ± 0.140
K1-07	4/24/08	<0.25	<0.15	<0.15	1.80 ± 0.220	<0.1	0.908 ± 0.140
K1-07	04/24/08 DUP	<0.25	<0.15	<0.15	1.88 ± 0.230	<0.1	0.854 ± 0.140
K1-07	7/22/08	<0.25	<0.15	<0.15	1.82 ± 0.230	<0.1	0.900 ± 0.140
K1-07	10/16/08	<0.25	<0.15	<0.15	1.81 ± 0.260	0.119 ± 0.0540	0.788 ± 0.140
K1-08	1/29/08	<0.25	<0.15	<0.15	1.57 ± 0.210	<0.1	0.734 ± 0.120
K1-08	4/24/08	<0.25	<0.15	<0.15	2.02 ± 0.240	<0.1	0.887 ± 0.140
K1-08	7/22/08	<0.25	<0.15	<0.15	2.03 ± 0.250	0.136 ± 0.0510	1.02 ± 0.160
K1-08	10/14/08	<0.25	<0.15	<0.15	2.67 ± 0.380	0.310 ± 0.110	1.27 ± 0.220
K1-09	1/7/08	<0.25	<0.15	<0.15	2.13 ± 0.280	<0.1	1.02 ± 0.160
K1-09	4/24/08	<0.25	<0.15	<0.15	1.92 ± 0.220	<0.1	0.986 ± 0.140
K1-09	7/22/08	<0.25	<0.15	<0.15	2.10 ± 0.280	<0.1	0.899 ± 0.150
K1-09	10/14/08	<0.25	<0.15	<0.15	2.22 ± 0.310	<0.1	0.888 ± 0.170

B-5.7. Building 850 Operable Unit uranium isotopes by kinetic phosphorescence analysis (KPA) in ground water.

Location	Date	Uranium (µg/L)
W-850-2313	2/5/08	5.58 ± 0.800
W-850-2416	2/25/08	<0.1
W-850-2417	2/13/08	28.6 ± 2.87
W-865-2005	4/7/08	1.68 ± 0.194

B-5.8. Building 850 Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-850-2313	2/5/08	10500 ± 1100
W-850-2313	8/12/08	20000 ± 2000
W-850-2313	11/5/08	20000 ± 2000
W-850-2314	6/26/08	1520 ± 170
W-850-2314	8/12/08	1380 ± 160
W-850-2314	11/5/08	1250 ± 140
W-850-2416	2/25/08	<100
W-850-2416	11/5/08	<100
W-850-2417	2/13/08	52500 ± 5300
W-850-2417	11/5/08	25800 ± 2600
K1-01C	1/28/08	901 ± 110
K1-01C	5/6/08	798 ± 100
K1-01C	7/21/08	810 ± 100
K1-01C	10/27/08	848 ± 110
K1-01C	10/27/08 DUP	831 ± 110
K1-02A	6/25/08	<100
K1-02B	1/31/08	4040 ± 420
K1-02B	01/31/08 DUP	4020 ± 410
K1-02B	4/23/08	3910 ± 400
K1-02B	7/22/08	3780 ± 390
K1-02B	10/27/08	3550 ± 370
K1-04	1/10/08	346 ± 68.0
K1-04	4/23/08	300 ± 64.0
K1-04	7/21/08	365 ± 69.0
K1-04	07/21/08 DUP	325 ± 67.0
K1-04	10/20/08	312 ± 67.0
K1-05	1/14/08	199 ± 60.0
K1-05	4/23/08	194 ± 58.0
K1-05	7/21/08	244 ± 62.0
K1-05	10/16/08	158 ± 58.0
K1-06	4/8/08	3120 ± 320 O
K1-06	10/1/08	3090 ± 320
K1-07	1/24/08	<100
K1-07	4/24/08	<100
K1-07	04/24/08 DUP	<100
K1-07	7/22/08	<100
K1-07	10/16/08	<100
K1-08	1/29/08	215 ± 55.0
K1-08	4/24/08	161 ± 58.0
K1-08	7/22/08	229 ± 60.0
K1-08	10/14/08	152 ± 58.0
K1-09	1/7/08	174 ± 60.0
K1-09	4/24/08	159 ± 58.0
K1-09	7/22/08	180 ± 58.0
K1-09	10/14/08	154 ± 58.0
K2-03	4/9/08	111 ± 50.0 O

B-5.8. Building 850 Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K2-03	10/1/08	<100
K2-04D	4/22/08	5390 ± 550
K2-04D	04/22/08 DUP	5270 ± 540
K2-04D	10/1/08	4400 ± 450
K2-04S	4/22/08	7980 ± 810
K2-04S	10/1/08	6530 ± 660
NC2-05	4/15/08	<100
NC2-05	10/7/08	<100
NC2-05A	4/15/08	3990 ± 410
NC2-05A	10/7/08	3730 ± 390
NC2-06	4/15/08	5220 ± 530
NC2-06	10/7/08	5010 ± 510
NC2-06A	4/16/08	<100
NC2-06A	10/7/08	<100
NC2-09	4/15/08	<100
NC2-09	10/7/08	<100
NC2-10	5/20/08	293 ± 66.0
NC2-10	10/8/08	298 ± 65.0
NC2-11D	5/1/08	3270 ± 340
NC2-11D	10/13/08	3270 ± 340
NC2-11I	4/15/08	3670 ± 380
NC2-11I	10/8/08	4020 ± 410
NC2-11S	4/15/08	4610 ± 470
NC2-11S	10/8/08	4400 ± 450
NC2-12D	4/17/08	6070 ± 620
NC2-12D	04/17/08 DUP	6360 ± 650
NC2-12D	10/8/08	5850 ± 600
NC2-12I	4/17/08	6300 ± 640
NC2-12I	10/8/08	6070 ± 620
NC2-12S	4/17/08	2810 ± 290
NC2-12S	10/8/08	2750 ± 290
NC2-13	4/17/08	4520 ± 470
NC2-13	04/17/08 DUP	4560 ± 897
NC2-13	10/8/08	4270 ± 440
NC2-13	10/08/08 DUP	4140 ± 430
NC2-14S	4/21/08	3640 ± 380
NC2-14S	10/8/08	3950 ± 410
NC2-15	4/21/08	4840 ± 500
NC2-15	10/9/08	4640 ± 480
NC2-16	4/21/08	939 ± 120
NC2-16	10/9/08	672 ± 93.0
NC2-17	4/22/08	9970 ± 1000
NC2-17	10/9/08	9790 ± 990
NC2-18	4/21/08	14300 ± 1400
NC2-18	04/21/08 DUP	15000 ± 3060
NC2-18	10/9/08	12800 ± 1300

B-5.8. Building 850 Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC2-18	10/09/08 DUP	14500 ± 2820
NC2-19	4/22/08	<100
NC2-19	10/9/08	<100
NC2-20	4/14/08	<100
NC2-20	10/9/08	<100
NC2-21	4/14/08	<100
NC2-21	10/9/08	<100
NC7-10	4/23/08	14800 ± 1500
NC7-10	10/13/08	16400 ± 1600
NC7-11	4/23/08	12800 ± 1300
NC7-11	10/13/08	15500 ± 1600
NC7-15	4/23/08	798 ± 100
NC7-15	10/13/08	1200 ± 140
NC7-19	4/29/08	4360 ± 450
NC7-19	10/13/08	4000 ± 410
NC7-27	4/30/08	12600 ± 1300
NC7-27	10/14/08	12700 ± 1300
NC7-28	4/30/08	26800 ± 2700
NC7-28	10/14/08	26600 ± 2700
NC7-29	4/30/08	<100
NC7-29	10/14/08	<100
NC7-43	5/1/08	5660 ± 580
NC7-43	10/15/08	4960 ± 510
NC7-44	5/1/08	<100
NC7-44	10/15/08	<100
NC7-46	5/1/08	<100
NC7-46	10/15/08	<100
NC7-54	5/5/08	13400 ± 1400
NC7-54	10/16/08	15800 ± 1600
NC7-56	5/6/08	9870 ± 1000
NC7-56	10/20/08	10300 ± 1000
NC7-58	5/6/08	8020 ± 810
NC7-58	10/20/08	8180 ± 830
NC7-59	5/6/08	9750 ± 990
NC7-59	10/20/08	9780 ± 990
NC7-60	5/7/08	1300 ± 150
NC7-60	10/20/08	1310 ± 150
NC7-61	4/23/08	28600 ± 2900
NC7-61	04/23/08 DUP	32300 ± 6390
NC7-61	10/13/08	26700 ± 2700
NC7-61	10/13/08 DUP	27400 ± 2800
NC7-62	5/7/08	10300 ± 1000
NC7-62	10/21/08	9930 ± 1000
NC7-69	4/30/08	<100
NC7-69	04/30/08 DUP	<100
NC7-69	10/21/08	<100

B-5.8. Building 850 Operable Unit tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC7-70	5/8/08	56100 ± 5600
NC7-70	10/21/08	47800 ± 4800
NC7-70	10/21/08 DUP	53700 ± 10400
NC7-71	5/8/08	<100
NC7-71	10/21/08	208 ± 59.0
NC7-72	5/6/08	8890 ± 900
NC7-72	05/06/08 DUP	8900 ± 900
NC7-72	10/21/08	10400 ± 1100
NC7-73	5/6/08	9330 ± 940
NC7-73	10/20/08	9030 ± 920
NC7-76	5/8/08	4170 ± 430
NC7-76	10/23/08	4200 ± 430
W-850-05	5/8/08	20500 ± 2100
W-850-05	10/23/08	19500 ± 2000
W-850-2145	5/15/08	9130 ± 920
W-850-2145	10/23/08	8600 ± 870
W-850-2312	10/23/08	5400 ± 550
W-850-2315	5/15/08	<100
W-850-2315	7/22/08	<100
W-850-2315	10/23/08	<100
W-PIT1-02	1/14/08	1970 ± 210
W-PIT1-02	7/17/08	1580 ± 180
W-PIT1-2209	1/31/08	<100
W-PIT1-2209	4/8/08	<100 O
W-PIT1-2209	7/14/08	<100
W-PIT1-2209	07/14/08 DUP	<100
W-PIT1-2209	10/27/08	<100
W-PIT1-2225	2/6/08	<100
W-PIT1-2225	4/9/08	<100 O
W-PIT1-2225	7/8/08	<100
W-PIT1-2225	10/2/08	<100
W-PIT7-16	5/14/08	<100
W-PIT7-16	10/27/08	<100
W-865-1802	4/7/08	158 ± 55.0 O
W-865-1802	11/3/08	155 ± 57.0
W-865-1803	4/7/08	2770 ± 290 O
W-865-1803	11/5/08	2620 ± 280
W-865-2005	4/7/08	<100 O

B-5.9. Building 850 Operable Unit high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
K1-01C	1/28/08	-	-	-	<5	<5	-	-	-	-	-	<1	<5	<1
K1-01C	5/6/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
K1-01C	7/21/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-01C	10/27/08	-	-	-	-	-	-	-	-	-	-	<1 O	-	<1 O
K1-01C	10/27/08 DUP	-	-	-	-	-	-	-	-	-	-	<1 O	-	<1 O
K1-02B	1/31/08	-	-	-	<5	<5	-	-	-	-	-	<1 IJ	<5	<1 IJ
K1-02B	01/31/08 DUP	-	-	-	<5	<5	-	-	-	-	-	<1 IJ	<5	<1 IJ
K1-02B	4/23/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-02B	7/22/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-02B	10/27/08	-	-	-	-	-	-	-	-	-	-	<1 O	-	<1 O
K1-04	1/10/08	-	-	-	<2 D	<2 D	-	-	-	-	-	<1	DR	<1
K1-04	4/23/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
K1-04	7/21/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-04	07/21/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-04	10/20/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-05	1/14/08	-	-	-	<2	<2	-	-	-	-	-	<1	<2	<1
K1-05	4/23/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-05	7/21/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
K1-05	10/16/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-07	1/24/08	-	-	-	<5	<5	-	-	-	-	-	<1	<5	<1
K1-07	4/24/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-07	04/24/08 DUP	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-07	7/22/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-07	10/16/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-08	1/29/08	-	-	-	<5	<5	-	-	-	-	-	<1	<5	<1
K1-08	4/24/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-08	7/22/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-08	10/14/08	-	-	-	-	-	-	-	-	-	-	<1 IJ	-	<1 IJ
K1-09	1/7/08	-	-	-	<5	<5	-	-	-	-	-	<1	<5	<1
K1-09	4/24/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
K1-09	7/22/08	-	-	-	-	-	-	-	-	-	-	<1 D	-	<1 D
K1-09	10/14/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
NC7-11	10/13/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	1.5	<5	<1
NC7-28	10/14/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	9.8	<2	5.7
NC7-61	10/13/08	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	7.1	<1.4	5.8 O
NC7-61	10/13/08 DUP	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	7.3	<1.3	5 O
NC7-70	10/21/08	<1.5 LO	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.74	<1.5	<0.74
NC7-70	10/21/08 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-05	10/23/08	R	R	R	R	R	R	R	R	R	R	R	R	R

B-5.9. Building 850 Operable Unit high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-850-2313	2/5/08	-	-	-	-	-	-	-	-	-	-	<1 IJ	-	<1 IJ
W-850-2314	6/26/08	R	RL	RLO	R	R	R	R	R	R	R	RLO	RO	R
W-850-2416	2/25/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-850-2416	11/5/08	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.83	<1.7	<0.83
W-850-2417	2/13/08	-	-	-	-	-	-	-	-	-	-	6	-	4.2
W-850-2417	11/5/08	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	9.6	<1.5	5.9
W-865-2005	4/7/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1

B-5.10. Building 850 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-850-2313	11/5/08	<10 D
W-850-2314	6/26/08	<10
W-850-2416	11/5/08	<10 D
W-850-2417	11/5/08	<10 D
W-850-2145	10/23/08	<10
W-850-2315	10/23/08	DR
W-PIT1-2209	10/27/08	DR
W-PIT1-2225	10/2/08	<10 D
W-865-2005	10/29/08	<10

B-5.11. Pit 2 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K2-01C	4/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC2-08	4/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT2-1934	4/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT2-1935	4/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K2-01C	4/16/08	E601	0 of 18
NC2-08	4/16/08	E601	0 of 18
W-PIT2-1934	4/9/08	E601	0 of 18
W-PIT2-1935	4/9/08	E601	0 of 18

B-5.12. Pit 2 Landfill uranium isotopes by mass spectrometry in ground water.

Location	Date	Request	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
K2-01C	1/16/08	ICMSRAD	4.70 ± 0.100	-	2.60 ± 0.100	0.0850 ± 0.000750	<0.007	2.00 ± 0.0120
K2-01C	01/16/08 DUP	ICMSRAD	4.90 ± 0.0650	-	2.70 ± 0.0650	0.0890 ± 0.000400	<0.007	2.10 ± 0.00830
K2-01C	4/16/08	MS	10.7 BJ	<312 BJ	<312 E	0.200 ± 0.0226	<3.2	5.50 ± 0.633 B
K2-01C	9/15/08	ICMSRAD	7.20 ± 0.100	-	3.90 ± 0.0990	0.130 ± 0.00150	<0.007	3.20 ± 0.0260
K2-01C	10/1/08	MS	6.8	<312	<312 BE	0.110 ± 0.0111	<3.2	2.90 ± 0.336
NC2-08	4/16/08	ICMSRAD	3.90 ± 0.0620	-	2.40 ± 0.0610	0.0690 ± 0.000770	<0.00029	1.50 ± 0.00930
NC2-08	4/16/08	MS	3.30 BJ	<312 BJ	<312 E	<0.11 E	<3.2	1.40 ± 0.161 B
NC2-08	10/7/08	ICMSRAD	2.60 ± 0.0500	-	1.60 ± 0.0500	0.0450 ± 0.000460	<0.00019	0.970 ± 0.00660
W-PIT2-1934	2/6/08	ICMSRAD	4.80 ± 0.0670	-	2.70 ± 0.0660	0.0760 ± 0.000570	<0.007	2.00 ± 0.0120
W-PIT2-1934	7/21/08	ICMSRAD	5.10 ± 0.0300	-	2.90 ± 0.0290	0.0800 ± 0.000380	<0.007	2.10 ± 0.00730
W-PIT2-1935	2/6/08	ICMSRAD	3.00 ± 0.0320	-	1.80 ± 0.0320	0.0470 ± 0.000380	<0.007	1.10 ± 0.00370
W-PIT2-1935	7/21/08	ICMSRAD	3.30 ± 0.0300	-	2.00 ± 0.0300	0.0530 ± 0.000260	<0.007	1.30 ± 0.00270
W-PIT2-2304	4/14/08	MS	4.70 BJ	<312 BJ	<312 E	<0.11 E	<3.2	2.70 ± 0.310 B
W-PIT2-2304	11/3/08	ICMSRAD	3.20 ± 0.0470	-	1.60 ± 0.0470	0.0520 ± 0.000170	<0.007	1.50 ± 0.00410

B-5.13. Pit 2 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K2-01C	1/16/08	-	4
K2-01C	01/16/08 DUP	-	4.2
K2-01C	4/16/08	18 D	<4
K2-01C	9/15/08	-	<4
NC2-08	1/30/08	-	<4
NC2-08	4/16/08	31 D	<4
NC2-08	7/7/08	-	4.1 L
W-PIT2-1934	2/6/08	-	<4
W-PIT2-1934	4/9/08	37 D	<4
W-PIT2-1934	7/21/08	-	<4
W-PIT2-1935	2/6/08	-	<4
W-PIT2-1935	4/9/08	34 D	<4
W-PIT2-1935	7/21/08	-	<4
W-PIT2-1935	07/21/08 DUP	-	<4
W-PIT2-2226	10/2/08	<0.5	-
W-PIT2-2304	4/11/08	37 H	5.8

B-5.14. Pit 2 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
K2-01C	4/16/08	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
NC2-08	4/16/08	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
W-PIT2-1934	4/9/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
W-PIT2-1935	4/9/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1

B-5.15. Pit 2 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K2-01C	1/16/08	5920 ± 600
K2-01C	01/16/08 DUP	5850 ± 600
K2-01C	4/16/08	2120 ± 230
K2-01C	9/15/08	4080 ± 420
K2-01C	10/1/08	4420 ± 450
NC2-08	1/30/08	5840 ± 590
NC2-08	4/16/08	7350 ± 750
NC2-08	7/7/08	6370 ± 650
NC2-08	10/7/08	5290 ± 540
W-PIT2-1934	2/6/08	1420 ± 160
W-PIT2-1934	4/9/08	1380 ± 150 O
W-PIT2-1934	7/21/08	1220 ± 140
W-PIT2-1934	11/4/08	1290 ± 150
W-PIT2-1935	2/6/08	2660 ± 280
W-PIT2-1935	4/9/08	2700 ± 280 O
W-PIT2-1935	7/21/08	2280 ± 240
W-PIT2-1935	07/21/08 DUP	2410 ± 488
W-PIT2-1935	11/4/08	2430 ± 260
W-PIT2-2226	2/6/08	<100
W-PIT2-2226	4/9/08	<100 O
W-PIT2-2226	7/8/08	<100
W-PIT2-2226	10/2/08	<100
W-PIT2-2304	3/25/08	6360 ± 650
W-PIT2-2304	4/14/08	6310 ± 640
W-PIT2-2304	10/6/08	6150 ± 630

B-5.16. Pit 2 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K2-01C	4/16/08	0.093 L
NC2-08	4/16/08	0.22 L
W-PIT2-1934	4/9/08	0.19
W-PIT2-1935	4/9/08	0.13

B-5.17. Pit 2 Landfill metals in ground water.

Constituents of concern	K2-01C	NC2-08	W-PIT2-1934	W-PIT2-1935
	4/16/08	4/16/08	4/9/08	4/9/08
Antimony (mg/L)	<0.005	<0.005	<0.005	<0.005
Arsenic (mg/L)	0.0065	0.011	0.01	0.0088
Barium (mg/L)	0.05 B	0.01 B	0.02 B	0.07 B
Beryllium (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cadmium (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
Chromium (mg/L)	<0.001	<0.001	<0.001	0.006
Cobalt (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
Copper (mg/L)	0.02	<0.001	0.001	<0.001
Lead (mg/L)	<0.005	<0.005	<0.005	<0.005
Lithium (mg/L)	0.0157	0.0233	0.0174	0.0223
Mercury (mg/L)	<0.0005 L	<0.0005 L	<0.0002	<0.0002
Molybdenum (mg/L)	0.003	0.003	0.002	0.002
Nickel (mg/L)	<0.002	<0.002	<0.002	<0.002
Selenium (mg/L)	0.0011	0.002	<0.002	<0.002
Silver (mg/L)	<0.001	<0.001	<0.001	<0.001
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001
Thorium (mg/L)	<0.001	<0.001	<0.001	<0.001
Uranium (mg/L)	0.0177	0.00443	0.00681	0.00379
Vanadium (mg/L)	0.05	0.07	0.07	0.05
Zinc (mg/L)	0.01	0.003	<0.01	<0.01

B-5.18. Pit 2 Landfill tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-PIT2-2226	10/2/08	<10

B-6.1. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-854-2218	1/9/08	E601	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2218	10/6/08	E601	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-01	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-01	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-02	7/15/08	E601	100 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-02	10/6/08	E601	96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-03	2/11/08	E601	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-03	4/8/08	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-03	8/18/08	E601	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-03	10/6/08	E601	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-04	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-04	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-05	5/29/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-05	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-06	5/29/08	E601	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-06	11/10/08	E601	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-07	5/29/08	E601	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-07	05/29/08 DUP	E601	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-07	11/10/08	E601	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-08	6/2/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-08	11/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-09	6/2/08	E601	9.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-09	11/10/08	E601	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-09	11/10/08 DUP	E601	7.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	6/2/08	E601	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	06/02/08 DUP	E601	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	11/4/08	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	11/04/08 DUP	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-13	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-13	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-14	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-15	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-15	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-17	1/9/08	E601	3.6	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-17	10/6/08	E601	2.5	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-18A	1/9/08	E601	30	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-18A	10/6/08	E601	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-45	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-45	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1701	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1701	11/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1707	6/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1707	11/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1731	6/3/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1731	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1822	6/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1822	11/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1823	6/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-6.1. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-854-1823	11/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1902	6/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1902	11/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2115	6/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2115	11/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	2/12/08	E601	40	<0.5	0.56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	4/8/08	E601	31	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	7/10/08	E601	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	10/7/08	E601	37	<0.5	0.57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING10	3/10/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING10	6/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING10	06/17/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING10	9/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING10	11/12/08	E601	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING11	3/10/08	E601	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING11	6/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING11	9/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING11	09/16/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING11	11/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-854-2218	1/9/08	E601	0 of 18	-
W-854-2218	10/6/08	E601	0 of 18	-
W-854-01	5/29/08	E601	0 of 18	-
W-854-01	11/4/08	E601	0 of 18	-
W-854-02	7/15/08	E601	0 of 18	-
W-854-02	10/6/08	E601	0 of 18	-
W-854-03	2/11/08	E601	0 of 18	-
W-854-03	4/8/08	E601	0 of 18	-
W-854-03	8/18/08	E601	0 of 18	-
W-854-03	10/6/08	E601	0 of 18	-
W-854-04	5/29/08	E601	0 of 18	-
W-854-04	11/4/08	E601	0 of 18	-
W-854-05	5/29/08	E601	0 of 18	-
W-854-05	11/4/08	E601	0 of 18	-
W-854-06	5/29/08	E601	0 of 18	-
W-854-06	11/10/08	E601	0 of 18	-
W-854-07	5/29/08	E601	0 of 18	-
W-854-07	05/29/08 DUP	E601	0 of 18	-
W-854-07	11/10/08	E601	0 of 18	-
W-854-08	6/2/08	E601	0 of 18	-
W-854-08	11/4/08	E601	0 of 18	-
W-854-09	6/2/08	E601	0 of 18	-
W-854-09	11/10/08	E601	0 of 18	-
W-854-09	11/10/08 DUP	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)
W-854-10	6/2/08	E601	0 of 18	-
W-854-10	06/02/08 DUP	E601	0 of 18	-
W-854-10	11/4/08	E601	0 of 18	-
W-854-10	11/04/08 DUP	E601	0 of 18	-
W-854-13	6/3/08	E601	0 of 18	-
W-854-13	11/11/08	E601	0 of 18	-
W-854-14	6/3/08	E601	0 of 18	-
W-854-15	6/3/08	E601	0 of 18	-
W-854-15	11/11/08	E601	0 of 18	-
W-854-17	1/9/08	E601	1 of 18	1.5
W-854-17	10/6/08	E601	1 of 18	2.6
W-854-18A	1/9/08	E601	0 of 18	-
W-854-18A	10/6/08	E601	0 of 18	-
W-854-45	6/4/08	E601	0 of 18	-
W-854-45	11/11/08	E601	0 of 18	-
W-854-1701	6/4/08	E601	0 of 18	-
W-854-1701	11/10/08	E601	0 of 18	-
W-854-1707	6/4/08	E601	0 of 18	-
W-854-1707	11/12/08	E601	0 of 18	-
W-854-1731	6/3/08	E601	0 of 18	-
W-854-1731	11/11/08	E601	0 of 18	-
W-854-1822	6/9/08	E601	0 of 18	-
W-854-1822	11/10/08	E601	0 of 18	-
W-854-1823	6/9/08	E601	0 of 18	-
W-854-1823	11/11/08	E601	0 of 18	-
W-854-1902	6/9/08	E601	0 of 18	-
W-854-1902	11/10/08	E601	0 of 18	-
W-854-2115	6/9/08	E601	0 of 18	-
W-854-2115	11/10/08	E601	0 of 18	-
W-854-2139	2/12/08	E601	0 of 18	-
W-854-2139	4/8/08	E601	0 of 18	-
W-854-2139	7/10/08	E601	0 of 18	-
W-854-2139	10/7/08	E601	0 of 18	-
SPRING10	3/10/08	E601	0 of 18	-
SPRING10	6/17/08	E601	0 of 18	-
SPRING10	06/17/08 DUP	E601	0 of 18	-
SPRING10	9/16/08	E601	0 of 18	-
SPRING10	11/12/08	E601	0 of 18	-
SPRING11	3/10/08	E601	0 of 18	-
SPRING11	6/17/08	E601	0 of 18	-
SPRING11	9/16/08	E601	0 of 18	-
SPRING11	09/16/08 DUP	E601	0 of 18	-
SPRING11	11/12/08	E601	0 of 18	-

B-6.2. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-854-2218	1/9/08	48	<4 E
W-854-2218	10/6/08	48	<4
W-854-01	5/29/08	<0.5	<4 L
W-854-02	7/15/08	51	6.3
W-854-03	2/11/08	46	14
W-854-03	4/8/08	47	14
W-854-03	8/18/08	48	10
W-854-03	10/6/08	48	9.5
W-854-04	5/29/08	<0.5	<4 L
W-854-05	5/29/08	57 D	<4 L
W-854-06	5/29/08	<0.5	<4 L
W-854-07	5/29/08	31 D	4.3 L
W-854-07	05/29/08 DUP	29 D	4 L
W-854-08	6/2/08	31 L	<4
W-854-09	6/2/08	40 DL	<4
W-854-10	6/2/08	16 L	<4
W-854-10	06/02/08 DUP	16	<4
W-854-13	6/3/08	<0.5	<4
W-854-14	6/3/08	230 D	<4
W-854-15	6/3/08	1.8	<4
W-854-17	1/9/08	4.6	5
W-854-17	10/6/08	11 D	<4
W-854-18A	1/9/08	34	<4 E
W-854-18A	10/6/08	34	<4
W-854-45	6/4/08	40 DLO	9.8
W-854-1701	6/4/08	<0.5 LO	<4
W-854-1707	6/4/08	6 LO	<4
W-854-1731	6/3/08	<0.5	<4
W-854-1822	6/9/08	0.69	<4
W-854-1823	6/9/08	23 D	22
W-854-1902	6/9/08	2.8	<4
W-854-2115	6/9/08	1.4	<4
W-854-2139	2/12/08	25	<4
W-854-2139	4/8/08	1.8	4.4
W-854-2139	7/10/08	25	5
W-854-2139	10/7/08	2.5	4.5
SPRING10	6/17/08	15	<4
SPRING10	06/17/08 DUP	15 D	<4
SPRING11	6/17/08	<0.5	<4

B-6.3. Building 854 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-854-2115	11/10/08	<10 O
W-854-2139	10/7/08	<10

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-832-2112	2/13/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	6/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	8/26/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	11/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-04A	2/28/08	E601	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-04A	9/9/08	E601	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-05	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-05	9/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-09	3/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-09	9/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-10	1/31/08	E601	49 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-10	9/8/08	E601	57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-11	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-11	9/8/08	E601	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-12	3/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-13	3/26/08	E601	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-13	9/17/08	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-14	3/5/08	E601	8	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-14	9/9/08	E601	6.3	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-15	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-15	9/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-16	2/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-16	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-16	9/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-16	11/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-17	3/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-17	9/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-18	3/18/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-18	9/9/08	E601	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-19	1/10/08	E601	3,600 D	<5 DE	22 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-19	7/21/08	E601	4,700 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-19	10/13/08	E601	4,200 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-20	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-20	5/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-20	9/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-20	11/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-20	11/19/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	2/6/08	E601	12	<0.5	8.5	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	02/06/08 DUP	E601	12	<0.5	9.2	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	9/9/08	E601	17	<0.5	3.5	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	09/09/08 DUP	E601	17	<0.5	3.4	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-22	3/17/08	E601	5.4	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-22	9/4/08	E601	8.6	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-26	3/18/08	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-26	9/4/08	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-27	3/4/08	E601	530 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-830-27	03/04/08 DUP	E601	430 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-28	3/3/08	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-28	9/16/08	E601	34	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-29	3/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-29	9/4/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	3/17/08	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	03/17/08 DUP	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	9/8/08	E601	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	09/08/08 DUP	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-34	3/13/08	E601	340 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-830-34	9/8/08	E601	200 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-49	1/10/08	E624	1,700 D	<5 DE	<5 D	<5 D	<5 D	<5 DE	<5 D	<5 DE	<5 D	<5 D	<5 DE	<5 D	<5 D	<5 D
W-830-49	4/8/08	E601	1,400 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-49	7/14/08	E624	2,000 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-49	10/13/08	E601	960 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-50	2/28/08	E601	24	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-50	9/9/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-51	2/5/08	E601	59	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-51	7/9/08	E601	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-51	10/6/08	E601	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-52	2/5/08	E601	67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-53	2/5/08	E601	58	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-53	12/2/08	E601	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-54	2/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-54	9/16/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-55	2/11/08	E601	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-55	9/17/08	E601	7.3	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-56	1/31/08	E601	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-56	9/8/08	E601	2.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-57	1/10/08	E601	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5
W-830-57	4/8/08	E601	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-57	7/21/08	E601	29	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-57	10/13/08	E601	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-58	3/4/08	E601	440 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-830-58	9/8/08	E601	500 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-830-58	09/08/08 DUP	E601	400 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-59	1/10/08	E601	1,900 D	<2.5 DE	82 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-59	4/8/08	E601	1,800 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-59	7/14/08	E601	2,500 D	2.6 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-59	10/13/08	E601	2,300 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-60	1/10/08	E601	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-60	4/8/08	E601	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-60	7/21/08	E601	35	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-60	10/13/08	E601	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	1/31/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	5/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	9/8/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	11/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1807	1/10/08	E601	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1807	4/8/08	E601	670 D	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1807	7/14/08	E601	190 D	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-1807	10/13/08	E601	130 D	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1829	7/14/08	E601	1,100 D	<2.5 D	3 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-1830	3/13/08	E601	1,100 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-830-1830	9/8/08	E601	2,200 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-830-1831	2/11/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1831	6/12/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1831	06/12/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1831	9/22/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1831	11/19/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1832	2/11/08	E601	0.7	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1832	9/22/08	E601	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2213	1/10/08	E601	120 D	<0.5	8.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2213	7/14/08	E601	340 D	<0.5	1.9	<0.5	<0.5	0.62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2214	1/10/08	E601	460 D	0.66	0.99	<0.5	<0.5	<0.5 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2214	4/8/08	E601	460 D	0.59	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2214	7/14/08	E601	460 D	0.51	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2214	10/13/08	E601	480 D	0.53	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2215	1/10/08	E601	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 E	<0.5	<0.5
W-830-2215	4/8/08	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2215	7/14/08	E601	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2215	10/13/08	E601	31	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	2/5/08	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	4/8/08	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	7/9/08	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	10/6/08	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2311	2/19/08	E624	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-830-2311	2/27/08	E624	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-830-2311	2/27/08	E624	1.9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-830-2311	5/15/08	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2311	9/9/08	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2311	11/19/08	E601	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	2/12/08	E601	110 D	<0.5	3.6	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	7/15/08	E601	150 D	<0.5	4.1	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	10/14/08	E601	150 D	<0.5	6.2	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-09	3/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-09	9/9/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-10	2/12/08	E601	110 D	<0.5	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5
W-832-10	7/15/08	E601	95 D	<0.5	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5
W-832-10	10/14/08	E601	83	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5
W-832-11	2/12/08	E601	100 D	<0.5	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	<0.5
W-832-11	7/15/08	E601	100 D	<0.5	2.7	<0.5	<0.5	0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-11	10/14/08	E601	82	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	2/12/08	E601	52	<0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	7/15/08	E601	50	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	12/1/08	E601	67	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-13	2/12/08	E601	6.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-13	7/21/08	E601	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-15	2/12/08	E601	8.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-15	7/15/08	E601	9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-15	10/14/08	E601	71	<0.5	2.8	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-1927	3/3/08	E601	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-832-1927	9/16/08	E601	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5
W-832-23	3/13/08	E601	100 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-832-23	9/9/08	E601	600 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-24	3/13/08	E601	46 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-832-24	9/9/08	E601	53 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-25	2/12/08	E601	120 D	<0.5	4	<0.5	<0.5	0.93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-25	4/8/08	E601	44	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-25	7/15/08	E601	96	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	<0.5
W-832-25	10/14/08	E601	81	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-SC3	3/4/08	E601	23	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-SC3	03/04/08 DUP	E601	16	<0.5	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-SC4	3/4/08	E601	6.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-870-02	3/18/08	E601	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-870-02	9/17/08	E601	2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SVI-830-031	3/13/08	E601	2,700 D	15 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
SVI-830-031	9/10/08	E601	590 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
SVI-830-032	9/10/08	E601	780 D	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5
SVI-830-033	3/13/08	E601	35 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
SVI-830-033	9/10/08	E601	63 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SVI-830-035	3/13/08	E601	1,200 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
SVI-830-035	9/10/08	E601	1,300 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
SPRING3	3/4/08	E601	32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING3	9/16/08	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SPRING3	09/16/08 DUP	E601	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-01	1/23/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-01	5/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-01	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-01	11/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	1/23/08	E601	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	5/15/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	05/15/08 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	11/20/08	E601	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-03	1/23/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-03	5/27/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-03	8/5/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-03	11/20/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Benzene (µg/L)	Chloroethane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-832-2112	2/13/08	E601	0 of 18	-	-	-	-	-
W-832-2112	6/11/08	E601	0 of 18	-	-	-	-	-
W-832-2112	8/26/08	E601	0 of 18	-	-	-	-	-
W-832-2112	11/19/08	E601	0 of 18	-	-	-	-	-
W-830-04A	2/28/08	E601	0 of 18	-	-	-	-	-
W-830-04A	9/9/08	E601	0 of 18	-	-	-	-	-
W-830-05	1/31/08	E601	0 of 18	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Benzene (µg/L)	Chloroethane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-830-05	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-09	3/18/08	E601	0 of 18	-	-	-	-	-
W-830-09	9/4/08	E601	0 of 18	-	-	-	-	-
W-830-10	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-10	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-11	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-11	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-12	3/18/08	E601	0 of 18	-	-	-	-	-
W-830-13	3/26/08	E601	0 of 18	-	-	-	-	-
W-830-13	9/17/08	E601	0 of 18	-	-	-	-	-
W-830-14	3/5/08	E601	1 of 18	1.3	-	-	-	-
W-830-14	9/9/08	E601	1 of 18	1.2	-	-	-	-
W-830-15	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-15	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-16	2/11/08	E601	0 of 18	-	-	-	-	-
W-830-16	6/12/08	E601	0 of 18	-	-	-	-	-
W-830-16	9/17/08	E601	0 of 18	-	-	-	-	-
W-830-16	11/19/08	E601	0 of 18	-	-	-	-	-
W-830-17	3/19/08	E601	0 of 18	-	-	-	-	-
W-830-17	9/17/08	E601	0 of 18	-	-	-	-	-
W-830-18	3/18/08	E601	0 of 18	-	-	-	-	-
W-830-18	9/9/08	E601	0 of 18	-	-	-	-	-
W-830-19	1/10/08	E601	1 of 18	22 D	-	-	-	-
W-830-19	7/21/08	E601	0 of 18	-	-	-	-	-
W-830-19	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-20	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-20	5/15/08	E601	0 of 18	-	-	-	-	-
W-830-20	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-20	11/19/08	E601	0 of 18	-	-	-	-	-
W-830-20	11/19/08 DUP	E601	0 of 18	-	-	-	-	-
W-830-21	2/6/08	E601	1 of 18	30	-	-	-	-
W-830-21	02/06/08 DUP	E601	1 of 18	32	-	-	-	-
W-830-21	9/9/08	E601	1 of 18	10	-	-	-	-
W-830-21	09/09/08 DUP	E601	1 of 18	9.9	-	-	-	-
W-830-22	3/17/08	E601	1 of 18	1.4	-	-	-	-
W-830-22	9/4/08	E601	1 of 18	1.3	-	-	-	-
W-830-26	3/18/08	E601	0 of 18	-	-	-	-	-
W-830-26	9/4/08	E601	0 of 18	-	-	-	-	-
W-830-27	3/4/08	E601	0 of 18	-	-	-	-	-
W-830-27	03/04/08 DUP	E601	0 of 18	-	-	-	-	-
W-830-28	3/3/08	E601	0 of 18	-	-	-	-	-
W-830-28	9/16/08	E601	0 of 18	-	-	-	-	-
W-830-29	3/18/08	E601	0 of 18	-	-	-	-	-
W-830-29	9/4/08	E601	0 of 18	-	-	-	-	-
W-830-30	3/17/08	E601	0 of 18	-	-	-	-	-
W-830-30	03/17/08 DUP	E601	0 of 18	-	-	-	-	-
W-830-30	9/8/08	E601	0 of 18	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Benzene (µg/L)	Chloroethane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-830-30	09/08/08 DUP	E601	0 of 18	-	-	-	-	-
W-830-34	3/13/08	E601	0 of 18	-	-	-	-	-
W-830-34	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-49	1/10/08	E624	0 of 30	-	-	-	-	-
W-830-49	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-49	7/14/08	E624	0 of 30	-	-	-	-	-
W-830-49	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-50	2/28/08	E601	0 of 18	-	-	-	-	-
W-830-50	9/9/08	E601	0 of 18	-	-	-	-	-
W-830-51	2/5/08	E601	0 of 18	-	-	-	-	-
W-830-51	7/9/08	E601	0 of 18	-	-	-	-	-
W-830-51	10/6/08	E601	1 of 18	-	-	-	0.78	-
W-830-52	2/5/08	E601	0 of 18	-	-	-	-	-
W-830-53	2/5/08	E601	0 of 18	-	-	-	-	-
W-830-53	12/2/08	E601	0 of 18	-	-	-	-	-
W-830-54	2/11/08	E601	0 of 18	-	-	-	-	-
W-830-54	9/16/08	E601	0 of 18	-	-	-	-	-
W-830-55	2/11/08	E601	0 of 18	-	-	-	-	-
W-830-55	9/17/08	E601	0 of 18	-	-	-	-	-
W-830-56	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-56	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-57	1/10/08	E601	0 of 18	-	-	-	-	-
W-830-57	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-57	7/21/08	E601	0 of 18	-	-	-	-	-
W-830-57	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-58	3/4/08	E601	0 of 18	-	-	-	-	-
W-830-58	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-58	09/08/08 DUP	E601	0 of 18	-	-	-	-	-
W-830-59	1/10/08	E601	1 of 18	82 D	-	-	-	-
W-830-59	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-59	7/14/08	E601	0 of 18	-	-	-	-	-
W-830-59	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-60	1/10/08	E601	0 of 18	-	-	-	-	-
W-830-60	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-60	7/21/08	E601	0 of 18	-	-	-	-	-
W-830-60	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-1730	1/31/08	E601	0 of 18	-	-	-	-	-
W-830-1730	5/15/08	E601	0 of 18	-	-	-	-	-
W-830-1730	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-1730	11/19/08	E601	0 of 18	-	-	-	-	-
W-830-1807	1/10/08	E601	0 of 18	-	-	-	-	-
W-830-1807	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-1807	7/14/08	E601	0 of 18	-	-	-	-	-
W-830-1807	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-1829	7/14/08	E601	0 of 18	-	-	-	-	-
W-830-1830	3/13/08	E601	0 of 18	-	-	-	-	-
W-830-1830	9/8/08	E601	0 of 18	-	-	-	-	-
W-830-1831	2/11/08	E601	0 of 18	-	-	-	-	-
W-830-1831	6/12/08	E601	0 of 18	-	-	-	-	-
W-830-1831	06/12/08 DUP	E601	0 of 18	-	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Benzene (µg/L)	Chloroethane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-830-1831	9/22/08	E601	0 of 18	-	-	-	-	-
W-830-1831	11/19/08	E601	0 of 18	-	-	-	-	-
W-830-1832	2/11/08	E601	0 of 18	-	-	-	-	-
W-830-1832	9/22/08	E601	0 of 18	-	-	-	-	-
W-830-2213	1/10/08	E601	1 of 18	8.9	-	-	-	-
W-830-2213	7/14/08	E601	2 of 18	1.9	-	-	-	6.7
W-830-2214	1/10/08	E601	0 of 18	-	-	-	-	-
W-830-2214	4/8/08	E601	2 of 18	1.1	-	-	-	2.7
W-830-2214	7/14/08	E601	0 of 18	-	-	-	-	-
W-830-2214	10/13/08	E601	1 of 18	3.2	-	-	-	-
W-830-2215	1/10/08	E601	0 of 18	-	-	-	-	-
W-830-2215	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-2215	7/14/08	E601	0 of 18	-	-	-	-	-
W-830-2215	10/13/08	E601	0 of 18	-	-	-	-	-
W-830-2216	2/5/08	E601	0 of 18	-	-	-	-	-
W-830-2216	4/8/08	E601	0 of 18	-	-	-	-	-
W-830-2216	7/9/08	E601	0 of 18	-	-	-	-	-
W-830-2216	10/6/08	E601	0 of 18	-	-	-	-	-
W-830-2311	2/19/08	E624	1 of 30	-	7.1	-	-	-
W-830-2311	2/27/08	E624	0 of 30	-	-	-	-	-
W-830-2311	2/27/08	E624	1 of 30	-	6.6	-	-	-
W-830-2311	5/15/08	E601	0 of 18	-	-	-	-	-
W-830-2311	9/9/08	E601	0 of 18	-	-	-	-	-
W-830-2311	11/19/08	E601	0 of 18	-	-	-	-	-
W-832-01	2/12/08	E601	1 of 18	3.6	-	-	-	-
W-832-01	7/15/08	E601	1 of 18	4.1	-	-	-	-
W-832-01	10/14/08	E601	1 of 18	6.2	-	-	-	-
W-832-09	3/18/08	E601	0 of 18	-	-	-	-	-
W-832-09	9/9/08	E601	0 of 18	-	-	-	-	-
W-832-10	2/12/08	E601	1 of 18	3.7	-	-	-	-
W-832-10	7/15/08	E601	1 of 18	3	-	-	-	-
W-832-10	10/14/08	E601	1 of 18	2.4	-	-	-	-
W-832-11	2/12/08	E601	1 of 18	3.7	-	-	-	-
W-832-11	7/15/08	E601	1 of 18	2.7	-	-	-	-
W-832-11	10/14/08	E601	1 of 18	1.9	-	-	-	-
W-832-12	2/12/08	E601	0 of 18	-	-	-	-	-
W-832-12	7/15/08	E601	1 of 18	1.1	-	-	-	-
W-832-12	12/1/08	E601	1 of 18	1.2	-	-	-	-
W-832-13	2/12/08	E601	0 of 18	-	-	-	-	-
W-832-13	7/21/08	E601	0 of 18	-	-	-	-	-
W-832-15	2/12/08	E601	0 of 18	-	-	-	-	-
W-832-15	7/15/08	E601	0 of 18	-	-	-	-	-
W-832-15	10/14/08	E601	1 of 18	2.8	-	-	-	-
W-832-1927	3/3/08	E601	0 of 18	-	-	-	-	-
W-832-1927	9/16/08	E601	0 of 18	-	-	-	-	-
W-832-23	3/13/08	E601	0 of 18	-	-	-	-	-
W-832-23	9/9/08	E601	0 of 18	-	-	-	-	-
W-832-24	3/13/08	E601	0 of 18	-	-	-	-	-
W-832-24	9/9/08	E601	0 of 18	-	-	-	-	-
W-832-25	2/12/08	E601	1 of 18	4	-	-	-	-
W-832-25	4/8/08	E601	3 of 18	1.1	-	4.2	-	1.3
W-832-25	7/15/08	E601	1 of 18	1.7	-	-	-	-
W-832-25	10/14/08	E601	3 of 18	1.7	-	-	2.6	1.2

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-DCE (total) (µg/L)	Benzene (µg/L)	Chloroethane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-832-SC3	3/4/08	E601	0 of 18	-	-	-	-	-
W-832-SC3	03/04/08 DUP	E601	0 of 18	-	-	-	-	-
W-832-SC4	3/4/08	E601	0 of 18	-	-	-	-	-
W-870-02	3/18/08	E601	0 of 18	-	-	-	-	-
W-870-02	9/17/08	E601	0 of 18	-	-	-	-	-
SVI-830-031	3/13/08	E601	0 of 18	-	-	-	-	-
SVI-830-031	9/10/08	E601	0 of 18	-	-	-	-	-
SVI-830-032	9/10/08	E601	0 of 18	-	-	-	-	-
SVI-830-033	3/13/08	E601	0 of 18	-	-	-	-	-
SVI-830-033	9/10/08	E601	0 of 18	-	-	-	-	-
SVI-830-035	3/13/08	E601	0 of 18	-	-	-	-	-
SVI-830-035	9/10/08	E601	0 of 18	-	-	-	-	-
SPRING3	3/4/08	E601	0 of 18	-	-	-	-	-
SPRING3	9/16/08	E601	0 of 18	-	-	-	-	-
SPRING3	09/16/08 DUP	E601	0 of 18	-	-	-	-	-
W-880-01	1/23/08	E601	0 of 18	-	-	-	-	-
W-880-01	5/15/08	E601	0 of 18	-	-	-	-	-
W-880-01	8/5/08	E601	0 of 18	-	-	-	-	-
W-880-01	11/20/08	E601	0 of 18	-	-	-	-	-
W-880-02	1/23/08	E601	0 of 18	-	-	-	-	-
W-880-02	5/15/08	E601	0 of 18	-	-	-	-	-
W-880-02	05/15/08 DUP	E601	0 of 18	-	-	-	-	-
W-880-02	8/5/08	E601	0 of 18	-	-	-	-	-
W-880-02	11/20/08	E601	0 of 18	-	-	-	-	-
W-880-03	1/23/08	E601	0 of 18	-	-	-	-	-
W-880-03	5/27/08	E601	0 of 18	-	-	-	-	-
W-880-03	8/5/08	E601	0 of 18	-	-	-	-	-
W-880-03	11/20/08	E601	0 of 18	-	-	-	-	-

B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-832-2112	2/13/08	<0.5	<4
W-832-2112	8/26/08	<0.5	<4
W-830-04A	2/28/08	79 D	<4
W-830-05	1/31/08	63 DL	<4
W-830-09	3/18/08	<0.5	<4
W-830-10	1/31/08	45 DL	<4
W-830-11	1/31/08	4.1	<4
W-830-12	3/18/08	<0.5	<4
W-830-13	3/26/08	41 D	<4
W-830-14	3/5/08	<0.5 L	<4
W-830-15	1/31/08	1.3 L	<4
W-830-16	2/11/08	<0.5	<4
W-830-16	9/17/08	<0.5 L	<4
W-830-17	3/19/08	82 DL	<4
W-830-18	3/18/08	5.9	<4
W-830-19	1/10/08	150 D	4.3
W-830-19	7/21/08	-	<4
W-830-20	1/31/08	<1 D	<4
W-830-20	9/8/08	<0.5	<4
W-830-21	2/6/08	<0.5	<4
W-830-21	02/06/08 DUP	<0.5	<4
W-830-22	3/17/08	3.6	<4 L
W-830-26	3/18/08	5.3 D	<4 L
W-830-27	3/4/08	49 D	<4
W-830-27	03/04/08 DUP	56 D	5
W-830-28	3/3/08	8.6 D	<4
W-830-29	3/18/08	<0.5	<4
W-830-30	3/17/08	130 D	4.4
W-830-30	03/17/08 DUP	130 D	4.2
W-830-34	3/13/08	130 DL	<4
W-830-49	1/10/08	140 D	<4 E
W-830-49	7/14/08	180 D	4.9
W-830-50	2/28/08	11	<4
W-830-51	2/5/08	50	<4
W-830-52	2/5/08	51	<4
W-830-53	2/5/08	50	<4
W-830-54	2/11/08	1.6	<4
W-830-55	2/11/08	12	<4
W-830-56	1/31/08	25 DL	<4
W-830-57	1/10/08	16	<4 E
W-830-57	7/21/08	-	<4
W-830-58	3/4/08	78 D	6.8
W-830-59	1/10/08	95 D	5
W-830-59	7/14/08	-	6
W-830-60	1/10/08	8.1	<4 E
W-830-60	7/21/08	7.4 D	<4

B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-830-1730	1/31/08	<0.5 L	<4
W-830-1730	9/8/08	1.8	<4
W-830-1807	1/10/08	98 D	<4 E
W-830-1807	7/14/08	-	5.5
W-830-1830	3/13/08	58 DL	4.9
W-830-1831	2/11/08	2	<4
W-830-1831	9/22/08	1.9	<4
W-830-1832	2/11/08	2.8	<4
W-830-2213	1/10/08	42	5.7
W-830-2214	1/10/08	54	5.1
W-830-2214	4/8/08	49 D	-
W-830-2214	7/14/08	-	8.7
W-830-2215	1/10/08	14	<4
W-830-2215	4/8/08	1.6 D	-
W-830-2216	2/5/08	57	<4
W-830-2216	4/8/08	-	<4
W-830-2216	7/9/08	55 D	<4
W-830-2311	2/19/08	<0.5	<4
W-830-2311	9/9/08	<1 D	<4
W-832-01	2/12/08	64 D	<4
W-832-09	3/18/08	<0.5	<4
W-832-10	2/12/08	83 D	5.2
W-832-11	2/12/08	82 D	7.7
W-832-12	2/12/08	110 D	4.4
W-832-13	2/12/08	150 D	15
W-832-15	2/12/08	130 D	8.6
W-832-1927	3/3/08	48 D	4.3
W-832-23	3/13/08	38 DL	5.1
W-832-24	3/13/08	31 DL	<4
W-832-25	2/12/08	73 D	4.9
W-832-25	7/15/08	45	8.7
W-832-SC3	3/4/08	6.5	<4
W-832-SC3	03/04/08 DUP	9.9 D	<4
W-832-SC4	3/4/08	58 D	<4
W-870-02	3/18/08	8.8	<4
SVI-830-031	3/13/08	100 DL	<4
SVI-830-033	3/13/08	240 DL	<4
SVI-830-035	3/13/08	65 DL	<4
SPRING3	3/4/08	33 D	<4
W-880-01	1/23/08	<0.5	<4
W-880-01	8/5/08	<0.5	<4
W-880-02	1/23/08	5.7 D	<4
W-880-02	8/5/08	<2.5 D	<4
W-880-03	1/23/08	<0.5	<4
W-880-03	8/5/08	<0.5	<4

B-7.3. Building 832 Canyon Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-832-2112	11/18/08	<10
W-830-2214	10/13/08	<10
W-830-2215	10/13/08	<10
W-830-2216	10/6/08	<10 D
W-830-2311	11/19/08	<10

B-7.4. Building 832 Canyon Operable Unit high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-830-2311	2/19/08	<0.75	<0.75	<0.75	<0.75	<1.5	<0.75	<1.5	<1.5	<1.5	<1.5	<0.75	<0.75	<0.75
W-880-01	1/23/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-880-01	8/5/08	<4 D	<4 D	<4 D	<4 D	<4 D	<4 D	<4 D	<4 D	<4 D	<4 D	540 D	<4 D	<2 D
W-880-02	1/23/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-880-02	8/5/08	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.81	<1.6	<0.81
W-880-03	1/23/08	-	-	-	-	-	-	-	-	-	-	<1	-	<1
W-880-03	8/5/08	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-8.1. Building 851 Firing Table uranium isotopes by mass spectrometry in ground water.

Location	Date	Request	Uranium (pCi/L)	Uranium 233 by mass (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 by mass (pCi/L)
W-851-05	5/20/08	MS	0.64	< 312	< 312 E	< 0.11	< 3.2	< 0.017 BE
W-851-05	11/13/08	ICMSRAD	< 0.0627	-	< 0.036	0.000320 ± 0.0000130	<0.00025	0.00740 ± 0.0000960
W-851-06	5/12/08	MS	1.30 D	< 1,560 D	< 312 E	< 0.54 D	< 3.2	< 0.084 BDE
W-851-06	5/12/08	ICMSRAD	0.170 ± 0.0120	-	0.130 ± 0.0120	0.00180 ± 0.0000250	<0.00014	0.0450 ± 0.000410
W-851-06	11/13/08	ICMSRAD	< 0.0627	-	< 0.16	0.00170 ± 0.0000900	<0.00022	0.0410 ± 0.000280
W-851-07	5/12/08	MS	0.0490 D	< 623 D	< 312 D	< 0.22 D	< 3.2 D	0.0490 ± 0.00563 BD
W-851-07	11/12/08	ICMSRAD	< 0.0627	-	< 0.16	0.00160 ± 0.0000780	<0.00025	0.0340 ± 0.000480
W-851-08	5/12/08	MS	0.0640 D	< 623 D	< 312 D	< 0.22 D	< 3.2 D	0.0640 ± 0.00736 BD
W-851-08	5/12/08	ICMSRAD	0.150 ± 0.00530	-	0.0870 ± 0.00520	0.00230 ± 0.0000570	< 0.0002	0.0620 ± 0.000870
W-851-08	11/12/08	ICMSRAD	1.00 ± 0.0360	-	0.580 ± 0.0350	0.0190 ± 0.000360	<0.00031	0.430 ± 0.00670

B-8.2. Building 851 Firing Table tritium in ground water.

Location	Date	Tritium (pCi/L)
W-851-05	5/20/08	<100
W-851-06	5/12/08	<100
W-851-07	5/12/08	<100
W-851-08	5/12/08	<100

B-8.3. Building 845 Firing Table and Pit 9 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K9-01	1/29/08	<100
K9-01	4/1/08	<100
K9-01	7/9/08	<100
K9-01	10/6/08	<100
K9-02	2/11/08	<100
K9-02	4/1/08	<100
K9-02	7/9/08	<100
K9-02	10/6/08	<100
K9-03	2/11/08	<100
K9-03	4/1/08	<100
K9-03	7/9/08	<100
K9-03	10/6/08	<100
K9-04	2/11/08	<100
K9-04	4/1/08	<100
K9-04	7/9/08	<100
K9-04	10/6/08	<100

B-8.4. Building 845 Firing Table and Pit 9 Landfill metals in ground water.

Constituents of concern	K9-01	K9-02	K9-03	K9-04
	4/1/08	4/1/08	4/1/08	4/1/08
Antimony (mg/L)	<0.005	<0.005	<0.005	<0.005
Arsenic (mg/L)	0.0034	0.028	0.0049	<0.002
Barium (mg/L)	0.01	0.02	0.01	0.01
Beryllium (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Cadmium (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
Chromium (mg/L)	<0.001	<0.001	<0.001	<0.001
Cobalt (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005
Copper (mg/L)	<0.001	<0.001	<0.001	<0.001
Lead (mg/L)	<0.005	<0.005	<0.005	<0.005
Lithium (mg/L)	0.0753	0.0623	0.0771	0.0667
Mercury (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.03	0.05	0.03	0.03
Nickel (mg/L)	<0.002	<0.002	<0.002	<0.002
Selenium (mg/L)	<0.002	<0.002	<0.002	<0.002
Silver (mg/L)	<0.001	<0.001	<0.001	<0.001
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001
Thorium (mg/L)	<0.001	<0.001	<0.001	<0.001
Uranium (mg/L)	<0.0002	<0.0002 E	0.000223	<0.0002 E
Vanadium (mg/L)	<0.002	<0.002	<0.002	<0.002
Zinc (mg/L)	<0.01	<0.01	<0.01	<0.01

B-8.5. Building 845 Firing Table and Pit 9 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K9-01	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K9-02	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K9-03	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K9-04	4/1/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K9-01	4/1/08	E601	0 of 18
K9-02	4/1/08	E601	0 of 18
K9-03	4/1/08	E601	0 of 18
K9-04	4/1/08	E601	0 of 18

B-8.6. Building 845 Firing Table and Pit 9 Landfill high explosive compounds in ground water.

Location	Date	HMX (µg/L)	RDX (µg/L)
K9-01	4/1/08	<1	<1
K9-02	4/1/08	<1	<1
K9-03	4/1/08	<1	<1
K9-04	4/1/08	<1	<1

B-8.7. Building 845 Firing Table and Pit 9 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K9-01	4/1/08	<0.5	<4
K9-02	4/1/08	<0.5	<4
K9-03	4/1/08	<0.5	<4
K9-04	4/1/08	<0.5	<4

B-8.8. Building 845 Firing Table and Pit 9 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K9-01	4/1/08	0.16
K9-02	4/1/08	0.23
K9-03	4/1/08	0.16
K9-04	4/1/08	0.23

B-8.9. Building 833 VOCs in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-833-12	3/17/08	E601	5.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-840-01	3/18/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-833-28	3/26/08	E601	180 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-833-30	3/17/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-833-30	7/7/08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-833-33	2/5/08	E601	170 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
W-833-12	3/17/08	E601	0 of 18
W-840-01	3/18/08	E601	0 of 18
W-833-28	3/26/08	E601	0 of 18
W-833-30	3/17/08	E601	0 of 18
W-833-30	7/7/08	E601	0 of 18
W-833-33	2/5/08	E601	0 of 18

B-8.10. Building 833 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-840-01	3/18/08	<0.5	<4

B-8.11. Building 801 Firing Table and Pit 8 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K8-01	4/10/08	129 ± 54.0
K8-01	04/10/08 DUP	155 ± 71.1
K8-01	10/2/08	<100
K8-02B	2/11/08	<100
K8-02B	02/11/08 DUP	127 ± 56.1
K8-02B	4/10/08	<100
K8-02B	7/8/08	<100
K8-02B	10/2/08	<100
K8-04	2/11/08	<100
K8-04	4/10/08	<100
K8-04	7/8/08	<100
K8-04	10/2/08	<100
K8-04	10/02/08 DUP	<100

B-8.12. Building 801 Firing Table and Pit 8 Landfill metals in ground water.

Constituents of concern	K8-02B	K8-04
	4/10/08	4/10/08
Antimony (mg/L)	<0.005	<0.005
Arsenic (mg/L)	0.019	0.025
Barium (mg/L)	0.008 B	0.006 B
Beryllium (mg/L)	<0.0002	<0.0002
Cadmium (mg/L)	<0.0005	<0.0005
Chromium (mg/L)	0.002	0.01
Cobalt (mg/L)	<0.0005	<0.0005
Copper (mg/L)	0.04	<0.001
Lead (mg/L)	<0.005	<0.005
Lithium (mg/L)	0.0321	0.0377
Mercury (mg/L)	<0.0002	<0.0002
Molybdenum (mg/L)	0.005	0.006
Nickel (mg/L)	0.005	<0.002
Selenium (mg/L)	0.0044	0.0098
Silver (mg/L)	<0.001	<0.001
Thallium (mg/L)	<0.001	<0.001
Thorium (mg/L)	<0.001	<0.001
Uranium (mg/L)	0.0118	0.0148
Vanadium (mg/L)	0.07	0.1
Zinc (mg/L)	0.04	<0.01

B-8.13. Building 801 Firing Table and Pit 8 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetrachloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K8-01	4/10/08	E601	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	04/10/08 DUP	E601	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	10/2/08	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-02B	4/10/08	E601	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-02B	10/2/08	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-03B	5/19/08	E601	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-03B	10/2/08	E601	2	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-04	4/10/08	E601	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-04	10/2/08	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-04	10/02/08 DUP	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K8-01	4/10/08	E601	0 of 18
K8-01	04/10/08 DUP	E601	0 of 18
K8-01	10/2/08	E601	0 of 18
K8-02B	4/10/08	E601	0 of 18
K8-02B	10/2/08	E601	0 of 18
K8-03B	5/19/08	E601	0 of 18
K8-03B	10/2/08	E601	0 of 18
K8-04	4/10/08	E601	0 of 18
K8-04	10/2/08	E601	0 of 18
K8-04	10/02/08 DUP	E601	0 of 18

B-8.14. Building 801 Firing Table and Pit 8 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
K8-02B	4/10/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
K8-04	4/10/08	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1

B-8.15. Building 801 Firing Table and Pit 8 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K8-01	4/10/08	44 D	<4
K8-01	04/10/08 DUP	51	4.1
K8-02B	4/10/08	33 D	<4
K8-03B	5/19/08	28	<4
K8-04	4/10/08	51 D	<4

B-8.16. Building 801 Firing Table and Pit 8 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K8-02B	4/10/08	0.25
K8-04	4/10/08	0.27

Appendix C

Ground Water Elevations Measured During 2008

Appendix C

Ground Water Elevations Measured During 2008

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
CDF1	1/10/08	13.6	489.37	
CDF1	6/12/08	10.8	491.82	
CDF1	8/27/08	13.9	488.72	
CDF1	11/10/08	21.39	481.23	
CON1	1/10/08	10	492.47	
CON1	6/12/08	20.78	480.3	
CON1	8/27/08	9.6	491.48	
CON1	11/10/08	9.96	491.12	
CON2	1/10/08	14.35	490.94	
CON2	6/12/08	10.72	494.57	
CON2	8/27/08	13.27	492.02	
CON2	11/10/08	14.76	490.53	
W-24P-03	1/10/08	-	NA	NM/UC
W-24P-03	6/12/08	-	NA	NM/UC
W-24P-03	9/15/08	2.31	425.43	
W-24P-03	11/10/08	2.1	425.64	
W-25D-01	1/10/08	-	NA	NM/UC
W-25D-01	6/12/08	-	NA	NM/RA
W-25D-01	9/15/08	-	NA	NM/RA FIRE HAZARD
W-25D-01	11/10/08	18.09	447.4	
W-25D-02	1/10/08	-	NA	NM/UC
W-25D-02	6/12/08	9.72	448.47	
W-25D-02	9/15/08	10.38	447.81	
W-25D-02	11/10/08	10.67	447.52	
W-25M-01	1/10/08	-	NA	NM/UC
W-25M-01	6/10/08	18.38	461.18	
W-25M-01	9/15/08	20.53	459.03	
W-25M-01	11/12/08	21.59	457.97	
W-25M-02	1/10/08	12.55	472.69	
W-25M-02	6/10/08	6.29	478.95	
W-25M-02	9/9/08	9.21	476.03	
W-25M-02	11/10/08	10.43	474.81	
W-25M-03	1/10/08	13.3	474.13	
W-25M-03	6/10/08	6.57	480.86	
W-25M-03	9/9/08	9.73	477.7	
W-25M-03	11/10/08	11	476.43	
W-25N-01	1/10/08	18.8	488.32	CB
W-25N-01	6/12/08	13.19	493.93	CB
W-25N-01	8/25/08	15.6	491.52	CB
W-25N-01	11/12/08	17.32	489.8	CB
W-25N-04	1/10/08	40.75	488.1	
W-25N-04	6/12/08	40.6	487.29	
W-25N-04	8/25/08	40.7	487.19	
W-25N-04	11/12/08	41.09	486.8	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-05	1/14/08	14.2	483.27	
W-25N-05	6/10/08	8.4	489.07	
W-25N-05	9/9/08	11.3	486.17	
W-25N-05	11/10/08	12.32	485.15	
W-25N-06	1/14/08	17.15	479.67	
W-25N-06	6/10/08	10.65	486.17	
W-25N-06	9/9/08	13.9	482.92	
W-25N-06	11/10/08	15.11	481.71	
W-25N-07	1/14/08	16.85	488.55	
W-25N-07	6/12/08	11.07	494.33	
W-25N-07	8/27/08	13.68	491.72	
W-25N-07	11/10/08	15.24	490.16	
W-25N-08	1/10/08	23.6	487.22	
W-25N-08	6/12/08	19.58	491.24	
W-25N-08	8/25/08	21.49	489.33	
W-25N-08	11/5/08	22.78	488.04	
W-25N-09	1/10/08	20	490.46	
W-25N-09	6/12/08	16.88	493.58	
W-25N-09	8/25/08	18.25	492.21	
W-25N-09	11/5/08	19.32	491.14	
W-25N-10	1/14/08	16.4	489.46	
W-25N-10	6/12/08	16.49	489.37	
W-25N-10	8/27/08	14.44	491.42	
W-25N-10	11/10/08	14.83	491.03	
W-25N-11	1/14/08	16.35	489.42	
W-25N-11	6/12/08	17.84	487.3	
W-25N-11	8/27/08	14.19	490.95	
W-25N-11	11/10/08	14.45	490.69	
W-25N-12	1/14/08	17	488.52	
W-25N-12	6/12/08	16.16	489.36	
W-25N-12	8/27/08	14.8	490.72	
W-25N-12	11/10/08	15.22	490.3	
W-25N-13	1/14/08	17.75	487.63	
W-25N-13	6/12/08	12.43	492.95	
W-25N-13	8/27/08	14.7	490.68	
W-25N-13	11/10/08	16.15	489.23	
W-25N-15	1/14/08	15	486.37	
W-25N-15	6/10/08	9.59	491.78	
W-25N-15	9/9/08	12.25	489.12	
W-25N-15	11/10/08	18.25	483.12	
W-25N-18	1/14/08	15.9	485.92	
W-25N-18	6/10/08	10.58	491.24	
W-25N-18	9/9/08	13.3	488.52	
W-25N-18	11/10/08	14	487.82	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-20	1/10/08	16.85	488.09	
W-25N-20	6/12/08	10.83	494.11	
W-25N-20	8/25/08	13.25	491.69	
W-25N-20	11/5/08	14.82	490.12	
W-25N-21	1/10/08	21.05	492.13	
W-25N-21	6/12/08	19.39	493.79	
W-25N-21	8/25/08	21.17	492.01	
W-25N-21	11/5/08	22.03	491.15	
W-25N-22	1/10/08	25.6	487.46	
W-25N-22	6/12/08	20.8	492.26	
W-25N-22	8/25/08	22.61	490.45	
W-25N-22	11/5/08	23.91	489.15	
W-25N-23	1/10/08	22.5	487.89	
W-25N-23	6/12/08	17.98	492.41	
W-25N-23	8/25/08	20.19	490.2	
W-25N-23	11/5/08	21.55	488.84	
W-25N-24	1/10/08	18.7	487.92	
W-25N-24	6/12/08	13.26	493.36	
W-25N-24	8/25/08	15.5	491.12	
W-25N-24	11/12/08	17.16	489.46	
W-25N-25	1/14/08	18.5	482.97	
W-25N-25	6/12/08	8.61	492.46	
W-25N-25	8/25/08	10.9	490.17	
W-25N-25	11/10/08	12.45	488.62	
W-25N-26	1/14/08	13.3	486.07	
W-25N-26	6/10/08	8.17	491.2	
W-25N-26	9/9/08	10.92	488.45	
W-25N-26	11/10/08	11.56	487.81	
W-25N-28	1/14/08	14.25	482.9	
W-25N-28	6/10/08	8.61	488.54	
W-25N-28	9/9/08	11.38	485.77	
W-25N-28	11/10/08	12.5	484.65	
W-26R-01	1/10/08	21.05	488.66	
W-26R-01	6/12/08	15.17	494.54	
W-26R-01	8/25/08	17.75	491.96	
W-26R-01	11/11/08	19.52	490.19	
W-26R-02	1/10/08	37.8	490.4	
W-26R-02	6/12/08	34.36	493.84	
W-26R-02	8/25/08	36.11	492.09	
W-26R-02	11/5/08	36.89	491.31	
W-26R-03	1/10/08	17.9	488.32	
W-26R-03	6/12/08	11.88	494.34	
W-26R-03	8/25/08	14.4	491.82	
W-26R-03	11/11/08	16.07	490.15	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-26R-04	1/10/08	20.2	488.76	
W-26R-04	6/12/08	14.24	494.72	
W-26R-04	8/25/08	16.81	492.15	
W-26R-04	11/5/08	18.52	490.44	
W-26R-05	1/10/08	24.5	488.61	
W-26R-05	6/12/08	18.96	494.15	
W-26R-05	8/25/08	21.25	491.86	
W-26R-05	11/5/08	22.73	490.38	
W-26R-06	1/10/08	26.5	488.68	
W-26R-06	6/12/08	20.43	494.41	
W-26R-06	8/25/08	23.07	491.77	
W-26R-06	11/5/08	24.73	490.11	
W-26R-07	1/10/08	29.95	490.64	
W-26R-07	6/12/08	26.71	493.88	
W-26R-07	8/25/08	28.5	492.09	
W-26R-07	11/5/08	29.36	491.23	
W-26R-08	1/10/08	32	491.11	
W-26R-08	6/12/08	29.22	493.89	
W-26R-08	8/25/08	30.91	492.2	
W-26R-08	11/5/08	31.68	491.43	
W-26R-11	1/10/08	18.7	488.51	
W-26R-11	6/12/08	12.38	494.83	
W-26R-11	8/25/08	14.97	492.24	
W-26R-11	11/5/08	16.7	490.51	
W-35A-01	1/14/08	17.9	490.51	CB
W-35A-01	6/12/08	10.12	498.29	CB
W-35A-01	8/27/08	13.4	495.01	CB
W-35A-01	11/10/08	15.26	493.15	CB
W-35A-02	1/14/08	16.65	493.05	CB
W-35A-02	6/12/08	8.63	501.07	CB
W-35A-02	8/26/08	12.06	497.64	CB
W-35A-02	11/10/08	14.23	495.47	CB
W-35A-03	1/14/08	17.45	489.39	CB
W-35A-03	6/12/08	9.12	497.72	CB
W-35A-03	8/27/08	12.24	494.6	CB
W-35A-03	11/10/08	14.2	492.64	CB
W-35A-04	1/14/08	14.9	489.08	
W-35A-04	6/12/08	8.15	495.83	
W-35A-04	8/27/08	10.99	492.99	
W-35A-04	11/10/08	12.88	491.1	
W-35A-05	1/14/08	15.2	492.77	CB
W-35A-05	6/12/08	10.1	497.87	CB
W-35A-05	8/27/08	13.18	494.79	CB
W-35A-05	11/10/08	15.15	492.82	CB

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35A-06	1/14/08	16	488.32	
W-35A-06	6/12/08	8.34	495.98	
W-35A-06	8/27/08	11.15	493.17	
W-35A-06	11/10/08	13.25	491.07	
W-35A-07	1/14/08	4	506.6	
W-35A-07	6/12/08	0.72	512.6	
W-35A-07	8/26/08	1.6	511.72	
W-35A-07	11/10/08	2.56	510.76	
W-35A-08	1/14/08	18.35	499.51	
W-35A-08	6/12/08	13.09	504.87	
W-35A-08	8/26/08	16.45	501.51	
W-35A-08	11/10/08	17.59	500.37	
W-35A-09	1/14/08	20.1	495.45	
W-35A-09	6/12/08	12.25	503.4	
W-35A-09	8/26/08	15.75	499.9	
W-35A-09	11/10/08	18.12	497.53	
W-35A-10	1/14/08	17.7	494.02	
W-35A-10	6/12/08	10.06	502.1	
W-35A-10	8/26/08	12.83	499.33	
W-35A-10	11/10/08	15.15	497.01	
W-35A-11	1/14/08	8.2	497.15	
W-35A-11	6/12/08	2.24	503.11	
W-35A-11	8/27/08	3.3	502.05	
W-35A-11	11/10/08	3.88	501.47	
W-35A-12	1/14/08	11.25	494.57	
W-35A-12	6/12/08	3.9	501.92	
W-35A-12	8/27/08	6.05	499.77	
W-35A-12	11/10/08	7.73	498.09	
W-35A-13	1/14/08	14	489.34	
W-35A-13	6/12/08	6.81	496.53	
W-35A-13	8/27/08	9.64	493.7	
W-35A-13	11/10/08	11.37	491.97	
W-35A-14	1/14/08	17.25	495.28	
W-35A-14	6/12/08	9.42	503.11	
W-35A-14	8/26/08	12.75	499.78	
W-35A-14	11/10/08	14.93	497.6	
W-7A	1/10/08	14.85	510.03	
W-7A	6/9/08	12.37	512.51	
W-7A	9/10/08	13.38	511.5	
W-7A	11/5/08	14.23	510.65	
W-7B	1/10/08	21	490.44	
W-7B	6/12/08	15.1	496.34	
W-7B	8/25/08	17.68	493.76	
W-7B	11/5/08	19.47	491.97	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7C	1/10/08	13.8	504.07	
W-7C	6/12/08	9.79	508.08	
W-7C	8/25/08	11.9	505.97	
W-7C	11/5/08	13.24	504.63	
W-7D	1/10/08	16.5	490.62	
W-7D	6/12/08	13.76	493.36	
W-7D	8/25/08	14.92	492.2	
W-7D	11/5/08	15.5	491.62	
W-7DS	1/10/08	18	488.6	
W-7DS	6/12/08	11.67	494.93	
W-7DS	8/25/08	14.27	492.33	
W-7DS	11/5/08	16	490.6	
W-7E	1/10/08	19.6	489.68	
W-7E	6/12/08	12.18	497.1	
W-7E	8/25/08	15.8	493.48	
W-7E	11/5/08	-	NA	
W-7ES	1/10/08	19.65	490.06	
W-7ES	6/12/08	12.77	496.94	
W-7ES	8/25/08	15.59	494.12	
W-7ES	11/5/08	-	NA	NM/RA CONSTRUCTION
W-7F	1/10/08	42	485.08	
W-7F	6/9/08	42.53	484.55	
W-7F	8/20/08	31	496.08	
W-7F	11/5/08	43.54	483.54	NM/RA CONSTRUCTION
W-7G	1/10/08	15.85	497.04	
W-7G	6/9/08	12.05	500.87	
W-7G	8/20/08	13.05	499.87	
W-7G	11/5/08	14.3	498.62	
W-7H	1/10/08	15.4	496.04	
W-7H	6/12/08	12	499.44	
W-7H	9/10/08	14.79	496.65	
W-7H	11/5/08	15.6	495.84	
W-7I	1/10/08	46.5	482.79	
W-7I	6/12/08	50.55	478.74	
W-7I	8/20/08	32.5	496.79	
W-7I	11/5/08	48.25	481.04	
W-7J	1/10/08	42	486.16	
W-7J	6/9/08	45.17	482.72	
W-7J	8/19/08	31.89	496	
W-7J	11/5/08	46.27	481.62	
W-7K	1/10/08	12.4	497.53	
W-7K	6/12/08	8.88	501.05	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7K	8/25/08	9.89	500.04	
W-7K	11/5/08	-	NA	NM/RA CONSTRUCTION
W-7L	1/10/08	15.45	497.31	
W-7L	6/12/08	11.68	501.08	
W-7L	8/25/08	12.7	500.06	
W-7L	11/5/08	13.92	498.84	
W-7M	1/10/08	14.5	493.25	
W-7M	6/12/08	9.32	498.43	
W-7M	8/25/08	11.29	496.46	
W-7M	11/5/08	12.77	494.98	
W-7N	1/10/08	17.9	490.28	
W-7N	6/12/08	11.84	496.34	
W-7N	8/25/08	14.44	493.74	
W-7N	11/5/08	16.18	492	
W-7O	1/10/08	25.8	490.29	
W-7O	6/9/08	19	497.09	
W-7O	8/20/08	21.82	494.27	
W-7O	11/5/08	24.07	492.02	
W-7P	1/10/08	19	490.92	
W-7P	6/12/08	17.85	492.07	
W-7P	8/25/08	16.4	493.52	
W-7P	11/5/08	-	NA	DRY
W-7PS	1/10/08	-	NA	DRY
W-7PS	6/12/08	12.62	496.16	
W-7PS	8/25/08	15.3	493.48	
W-7PS	11/5/08	17.1	491.68	
W-7Q	1/10/08	26.2	491.42	
W-7Q	6/9/08	18.79	498.83	
W-7Q	8/20/08	21.87	495.75	
W-7Q	11/5/08	24.22	493.4	
W-7R	1/10/08	20.6	489.8	
W-7R	6/12/08	13.5	496.9	
W-7R	8/25/08	16.35	494.05	
W-7R	11/5/08	18.25	492.15	
W-7S	1/10/08	20	489.88	
W-7S	6/12/08	12.88	497	
W-7S	8/25/08	15.73	494.15	
W-7S	11/5/08	-	NA	NM/RA
W-7T	1/10/08	20	489.77	
W-7T	6/12/08	12.74	497.03	
W-7T	8/25/08	15.6	494.17	
W-7T	11/5/08	-	NA	NM/RA CONSTRUCTION

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-843-01	1/10/08	118	505.76	
W-843-01	6/11/08	114.96	508.8	
W-843-01	8/25/08	115.42	508.34	
W-843-01	11/12/08	116.18	507.58	
W-843-02	1/10/08	102	520.59	
W-843-02	6/11/08	100.81	521.78	
W-843-02	8/25/08	101.2	521.39	
W-843-02	11/12/08	102.25	520.34	
W-872-01	1/10/08	33.3	497.34	
W-872-01	6/11/08	32.14	498.5	
W-872-01	8/20/08	30.96	499.68	
W-872-01	11/5/08	33.23	497.41	
W-872-02	1/10/08	36.6	495.86	
W-872-02	6/9/08	33.12	499.87	
W-872-02	8/19/08	33.5	499.49	
W-872-02	11/5/08	35.6	497.39	
W-873-01	1/10/08	26.05	507.88	
W-873-01	6/9/08	22.76	511.17	
W-873-01	8/19/08	23.92	510.01	
W-873-01	11/3/08	23.93	510	
W-873-02	1/10/08	3	530.13	
W-873-02	6/9/08	31.39	501.74	
W-873-02	8/19/08	32.24	500.89	
W-873-02	11/3/08	34.24	498.89	
W-873-03	1/10/08	31.2	502.59	
W-873-03	6/9/08	28.33	505.46	
W-873-03	9/30/08	30.63	503.16	
W-873-03	11/3/08	31.09	502.7	
W-873-04	1/10/08	20	511.41	
W-873-04	6/9/08	19.46	511.95	
W-873-04	9/30/08	20.1	511.31	
W-873-04	11/12/08	20.31	511.1	
W-873-06	1/10/08	34.95	498.11	
W-873-06	6/9/08	30.83	502.23	
W-873-06	8/19/08	31.72	501.34	
W-873-06	11/3/08	33.61	499.45	
W-873-07	1/10/08	42	490.9	
W-873-07	6/9/08	43.48	489.42	
W-873-07	8/19/08	44.88	488.02	
W-873-07	11/5/08	46.01	486.89	
W-875-01	1/10/08	21.1	511.3	
W-875-01	6/11/08	21.25	511.15	
W-875-01	8/20/08	21.31	511.09	
W-875-01	11/5/08	21.19	511.21	

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-875-02	1/10/08	22	509.36	
W-875-02	6/11/08	21.92	509.44	
W-875-02	8/20/08	22.18	509.18	
W-875-02	11/5/08	22.21	509.15	
W-875-03	1/10/08	-	NA	DRY/CB
W-875-03	6/11/08	-	NA	DRY/CB
W-875-03	8/20/08	32.14	496.5	CB
W-875-03	11/12/08	-	NA	DRY/CB
W-875-04	1/10/08	22	510.23	
W-875-04	6/11/08	21.75	510.48	
W-875-04	8/20/08	21.88	510.35	
W-875-04	11/5/08	21.93	510.3	
W-875-05	1/10/08	23.1	513.6	
W-875-05	6/11/08	23.14	513.56	
W-875-05	8/20/08	23.29	513.41	
W-875-05	11/5/08	23.41	513.29	
W-875-06	1/10/08	25	504.42	
W-875-06	6/11/08	26.72	502.7	
W-875-06	9/10/08	24.8	504.62	
W-875-06	11/5/08	25.36	504.06	CB
W-875-07	1/10/08	-	NA	DRY
W-875-07	6/11/08	35.98	492.46	
W-875-07	8/20/08	-	NA	NM UNABLE TO GET PROBE DOWN CASING
W-875-07	11/5/08	-	NA	NM UNABLE TO GET PROBE DOWN CASING
W-875-08	1/10/08	43.8	484.35	
W-875-08	6/11/08	51.68	476.47	
W-875-08	8/20/08	30.99	497.16	
W-875-08	11/5/08	-	NA	DRY
W-875-09	1/10/08	-	NA	DRY
W-875-09	6/11/08	-	NA	DRY
W-875-09	8/20/08	-	NA	DRY
W-875-09	11/5/08	-	NA	DRY
W-875-10	1/10/08	-	NA	DRY
W-875-10	6/11/08	-	NA	DRY
W-875-10	8/20/08	-	NA	DRY
W-875-10	11/5/08	-	NA	DRY
W-875-11	1/10/08	42	487.16	
W-875-11	6/11/08	41.73	487.43	
W-875-11	8/20/08	29.65	499.51	
W-875-11	11/5/08	41.9	487.26	
W-875-15	1/10/08	-	NA	DRY
W-875-15	6/11/08	-	NA	DRY

C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-875-15	8/20/08	29.54	498.8	
W-875-15	11/5/08	-	NA	DRY
W-876-01	1/10/08	24.9	513.08	
W-876-01	6/11/08	23.75	514.23	
W-876-01	8/20/08	24.49	513.49	
W-876-01	11/12/08	24.79	513.19	
W-879-01	1/10/08	39	513.32	
W-879-01	6/11/08	36.95	514.91	
W-879-01	8/25/08	37.63	514.23	
W-879-01	11/12/08	38.7	513.16	
W-889-01	1/10/08	39	514.63	
W-889-01	6/11/08	38.9	514.73	
W-889-01	8/25/08	38.98	514.65	
W-889-01	11/12/08	39.04	514.59	
W-CGSA-1732	1/10/08	-	NA	DRY
W-CGSA-1732	6/9/08	19.19	503.66	
W-CGSA-1732	9/25/08	19.19	503.66	
W-CGSA-1732	11/5/08	19.17	503.68	
W-CGSA-1733	1/10/08	21	490.99	
W-CGSA-1733	6/12/08	14.78	497.21	
W-CGSA-1733	8/25/08	17.65	494.34	
W-CGSA-1733	11/5/08	-	NA	DRY
W-CGSA-1735	1/10/08	-	NA	DRY
W-CGSA-1735	6/12/08	14.31	495.06	
W-CGSA-1735	8/25/08	-	NA	DRY
W-CGSA-1735	11/5/08	-	NA	DRY
W-CGSA-1736	1/10/08	20.95	488.42	
W-CGSA-1736	6/12/08	14.18	495.19	
W-CGSA-1736	8/25/08	16.8	492.57	
W-CGSA-1736	11/5/08	18.57	490.8	
W-CGSA-1737	1/10/08	18.2	489.41	
W-CGSA-1737	6/12/08	11.24	496.37	
W-CGSA-1737	8/25/08	13.98	493.63	
W-CGSA-1737	11/5/08	15.78	491.83	
W-CGSA-1739	1/10/08	19.3	493.17	
W-CGSA-1739	6/12/08	15.27	497.2	
W-CGSA-1739	8/25/08	18	494.47	
W-CGSA-1739	11/5/08	19.15	493.32	

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-1709	1/28/08	22.6	993.82	
W-834-1709	6/2/08	22.4	994.18	
W-834-1709	9/9/08	22.85	993.73	
W-834-1709	11/20/08	22.87	993.71	
W-834-1711	1/28/08	37.2	979.6	
W-834-1711	6/2/08	35.93	981.01	
W-834-1711	9/9/08	36.46	980.48	
W-834-1711	11/20/08	36.44	980.5	
W-834-1712	1/28/08	-	NA	DRY
W-834-1712	6/2/08	-	NA	DRY
W-834-1712	9/9/08	-	NA	DRY
W-834-1712	11/20/08	-	NA	DRY
W-834-1824	1/29/08	12.26	948.52	
W-834-1824	6/2/08	12.35	948.43	
W-834-1824	9/8/08	12.39	948.39	
W-834-1824	11/20/08	12.3	948.48	
W-834-1825	1/29/08	40.15	917.52	
W-834-1825	6/2/08	38.81	918.86	
W-834-1825	9/8/08	39.5	918.17	
W-834-1825	11/20/08	40.01	917.66	
W-834-1833	1/29/08	39.86	916.25	
W-834-1833	6/2/08	38.99	917.12	
W-834-1833	9/8/08	39.78	916.33	
W-834-1833	11/20/08	40.12	915.99	
W-834-2001	1/28/08	24	990.29	
W-834-2001	6/2/08	24.18	990.11	
W-834-2001	9/9/08	24.2	990.09	
W-834-2001	11/20/08	24.02	990.27	
W-834-2113	1/28/08	37.8	961.21	
W-834-2113	6/2/08	38.13	960.88	
W-834-2113	9/8/08	38.68	960.33	
W-834-2113	11/20/08	29.03	969.98	
W-834-2117	1/29/08	41.43	932.46	
W-834-2117	6/2/08	40.44	933.45	
W-834-2117	9/8/08	40.85	933.04	
W-834-2117	11/20/08	41.38	932.51	
W-834-2118	1/29/08	29.7	909.59	
W-834-2118	6/3/08	28.53	910.76	
W-834-2118	9/8/08	29.23	910.06	
W-834-2118	11/20/08	29.92	909.37	
W-834-2119	1/29/08	55.86	899.35	
W-834-2119	6/2/08	54.27	900.94	
W-834-2119	9/8/08	54.84	900.37	
W-834-2119	11/18/08	55.25	899.96	
W-834-A1	1/28/08	32.1	982.99	CB

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-A1	6/2/08	28.15	986.94	CB
W-834-A1	9/9/08	28.9	986.19	CB
W-834-A1	11/20/08	30.07	985.02	CB
W-834-A2	1/28/08	17.02	998.46	
W-834-A2	6/2/08	18.38	997.1	
W-834-A2	9/9/08	18.05	997.43	
W-834-A2	11/20/08	-	NA	DRY
W-834-B2	1/28/08	16.53	1001.86	VE
W-834-B2	6/2/08	16.38	1002.01	VE
W-834-B2	9/9/08	16.5	1001.89	VE
W-834-B2	11/20/08	16.41	1001.98	
W-834-B3	1/28/08	11.25	1006.9	VE
W-834-B3	6/2/08	11.32	1006.83	VE
W-834-B3	9/9/08	11.3	1006.85	VE
W-834-B3	11/20/08	11.29	1006.86	
W-834-B4	1/28/08	12.35	1003.22	CB
W-834-B4	6/2/08	13.85	1001.72	CB
W-834-B4	9/9/08	13.85	1001.72	CB
W-834-B4	11/20/08	-	NA	DRY
W-834-C2	1/28/08	17.07	1002.73	
W-834-C2	6/2/08	18.55	1001.25	
W-834-C2	9/9/08	-	NA	DRY
W-834-C2	11/20/08	-	NA	DRY
W-834-C4	1/28/08	4.6	1014.8	
W-834-C4	6/2/08	8.85	1010.41	
W-834-C4	9/9/08	-	NA	DRY
W-834-C4	11/20/08	11.83	1007.43	
W-834-C5	1/28/08	8.47	1007.2	
W-834-C5	6/2/08	11.35	1004.32	
W-834-C5	9/9/08	12.33	1003.34	
W-834-C5	11/20/08	13.84	1001.83	
W-834-D10	1/28/08	-	NA	DRY
W-834-D10	6/2/08	33.67	982.74	
W-834-D10	9/9/08	33.53	982.88	
W-834-D10	11/20/08	33.78	982.63	
W-834-D11	1/28/08	24.18	993.36	
W-834-D11	6/2/08	24.17	993.37	
W-834-D11	9/9/08	24.18	993.36	VE
W-834-D11	11/20/08	24.16	993.38	
W-834-D12	1/28/08	29.44	986.85	VE
W-834-D12	6/2/08	29.42	986.87	VE
W-834-D12	9/9/08	29.35	986.94	VE
W-834-D12	11/20/08	29.41	986.88	
W-834-D13	1/28/08	29	988.99	VE
W-834-D13	6/2/08	29.01	988.98	VE

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D13	9/9/08	-	NA	DRY
W-834-D13	11/20/08	28.88	989.11	
W-834-D14	1/28/08	30.05	988.32	
W-834-D14	6/2/08	30.17	988.2	
W-834-D14	9/9/08	29.8	988.57	
W-834-D14	11/20/08	30.9	987.47	
W-834-D15	1/28/08	23	995.16	
W-834-D15	6/2/08	24.22	993.94	
W-834-D15	9/9/08	22.5	995.66	
W-834-D15	11/20/08	-	NA	DRY
W-834-D16	1/28/08	-	NA	DRY
W-834-D16	6/2/08	-	NA	DRY
W-834-D16	9/9/08	-	NA	DRY
W-834-D16	11/20/08	-	NA	DRY
W-834-D17	1/28/08	-	NA	DRY
W-834-D17	6/2/08	-	NA	DRY
W-834-D17	9/9/08	-	NA	DRY
W-834-D17	11/20/08	-	NA	DRY
W-834-D18	1/28/08	27.33	991.13	
W-834-D18	6/2/08	24.04	994.42	
W-834-D18	9/9/08	25.31	993.15	
W-834-D18	11/20/08	-	NA	NM/RA
W-834-D2	1/28/08	-	NA	DRY
W-834-D2	6/2/08	-	NA	DRY
W-834-D2	9/9/08	-	NA	DRY
W-834-D2	11/20/08	-	NA	DRY
W-834-D3	1/28/08	27	991.55	
W-834-D3	6/2/08	26.86	991.69	
W-834-D3	9/9/08	26.6	991.95	
W-834-D3	11/20/08	28.63	989.92	
W-834-D4	1/28/08	34.75	983.61	
W-834-D4	6/2/08	34.76	983.6	
W-834-D4	9/9/08	-	NA	DRY
W-834-D4	11/20/08	35.88	982.48	
W-834-D5	1/28/08	29.15	989.32	
W-834-D5	6/2/08	29.92	988.55	
W-834-D5	9/9/08	29.4	989.07	
W-834-D5	11/20/08	31.7	986.77	
W-834-D6	1/28/08	33.9	984.38	
W-834-D6	6/2/08	34.32	983.96	
W-834-D6	9/9/08	34	984.28	
W-834-D6	11/20/08	34.22	984.06	
W-834-D7	1/28/08	32.41	981.51	
W-834-D7	6/2/08	32.56	981.36	
W-834-D7	9/9/08	32.6	981.32	

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D7	11/20/08	32.61	981.31	
W-834-D9A	1/28/08	-	NA	DRY
W-834-D9A	6/2/08	-	NA	DRY
W-834-D9A	9/9/08	-	NA	DRY
W-834-D9A	11/20/08	-	NA	DRY
W-834-G3	1/28/08	-	NA	DRY
W-834-G3	6/5/08	-	NA	DRY
W-834-G3	9/9/08	-	NA	DRY
W-834-G3	11/20/08	-	NA	DRY
W-834-H2	1/28/08	-	NA	DRY
W-834-H2	6/2/08	31.67	992.28	
W-834-H2	9/9/08	-	NA	DRY
W-834-H2	11/20/08	31.75	992.2	
W-834-J1	1/28/08	30.92	988.85	VE
W-834-J1	6/2/08	30.82	989.01	VE
W-834-J1	9/9/08	30.7	989.13	VE
W-834-J1	11/20/08	30.67	989.16	
W-834-J2	1/28/08	33.35	986.57	
W-834-J2	6/2/08	33.23	986.72	
W-834-J2	9/9/08	33.4	986.55	
W-834-J2	11/20/08	34.02	985.93	
W-834-J3	1/28/08	-	NA	DRY
W-834-J3	6/2/08	-	NA	DRY
W-834-J3	9/9/08	-	NA	DRY
W-834-K1A	1/28/08	-	NA	DRY
W-834-K1A	6/2/08	30.45	968.2	
W-834-K1A	9/8/08	-	NA	DRY
W-834-K1A	11/20/08	-	NA	DRY
W-834-M1	1/28/08	61.23	963.28	
W-834-M1	6/2/08	61.25	963.26	
W-834-M1	9/9/08	61	963.51	
W-834-M1	11/20/08	61.07	963.44	
W-834-M2	1/29/08	-	NA	DRY
W-834-M2	6/3/08	-	NA	DRY
W-834-M2	9/8/08	-	NA	DRY
W-834-M2	11/20/08	-	NA	DRY
W-834-S1	1/28/08	33.45	968.63	
W-834-S1	6/2/08	35.12	966.96	
W-834-S1	9/8/08	34.92	967.16	
W-834-S1	11/20/08	34.96	967.12	
W-834-S10	1/28/08	-	NA	DRY
W-834-S10	6/2/08	-	NA	DRY
W-834-S10	9/8/08	-	NA	DRY
W-834-S10	11/20/08	-	NA	DRY
W-834-S12A	1/28/08	51.5	953.23	

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-S12A	6/2/08	50.78	953.95	
W-834-S12A	9/8/08	50.74	953.99	
W-834-S12A	11/20/08	50.87	953.86	
W-834-S13	1/28/08	46.7	957.04	
W-834-S13	6/2/08	46.94	956.8	
W-834-S13	9/8/08	46.87	956.87	
W-834-S13	11/20/08	46.93	956.81	
W-834-S4	1/28/08	78.43	948.24	
W-834-S4	6/2/08	78.52	948.15	
W-834-S4	9/9/08	78.5	948.17	
W-834-S4	11/20/08	79.54	947.13	
W-834-S5	1/29/08	-	NA	DRY
W-834-S5	6/3/08	-	NA	DRY
W-834-S5	9/8/08	-	NA	DRY
W-834-S5	11/20/08	-	NA	DRY
W-834-S6	1/29/08	37.25	892.17	
W-834-S6	6/3/08	38.38	891.04	
W-834-S6	9/8/08	38.6	890.82	
W-834-S6	11/20/08	38.6	890.82	
W-834-S7	1/29/08	50.15	888.42	
W-834-S7	6/2/08	-	NA	NM
W-834-S7	9/8/08	50.55	888.02	
W-834-S7	11/20/08	50.89	887.68	
W-834-S8	1/28/08	59.85	942.87	
W-834-S8	6/2/08	59.21	943.51	
W-834-S8	9/8/08	59.03	943.69	
W-834-S8	11/20/08	59.81	942.91	
W-834-S9	1/28/08	56.65	943.85	
W-834-S9	6/2/08	55.18	944.83	
W-834-S9	9/8/08	54.97	945.04	
W-834-S9	11/20/08	55.67	944.34	
W-834-T1	1/28/08	314.8	644.12	
W-834-T1	6/2/08	-	NA	NM
W-834-T1	9/8/08	315.4	643.52	
W-834-T1	11/18/08	315.56	643.36	
W-834-T11	1/29/08	-	NA	DRY
W-834-T11	6/16/08	-	NA	DRY
W-834-T11	9/11/08	-	NA	DRY
W-834-T11	12/3/08	-	NA	DRY
W-834-T2	1/29/08	40.91	918.85	
W-834-T2	6/2/08	40.06	919.7	
W-834-T2	9/8/08	40.73	919.03	
W-834-T2	11/20/08	41.09	918.67	
W-834-T2A	1/29/08	39.25	919.53	
W-834-T2A	6/2/08	38	920.94	

C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-T2A	9/8/08	38.64	920.3	
W-834-T2A	11/20/08	39.19	919.75	
W-834-T2B	1/29/08	-	NA	DRY
W-834-T2B	6/2/08	-	NA	DRY
W-834-T2B	9/8/08	-	NA	DRY
W-834-T2B	11/20/08	-	NA	DRY
W-834-T2C	1/29/08	-	NA	DRY
W-834-T2C	6/2/08	-	NA	DRY
W-834-T2C	9/8/08	-	NA	DRY
W-834-T2C	11/20/08	-	NA	DRY
W-834-T2D	1/29/08	37	917.39	
W-834-T2D	6/2/08	36.08	918.31	
W-834-T2D	9/8/08	36.79	917.6	
W-834-T2D	11/20/08	37.11	917.28	
W-834-T3	1/29/08	325.1	607.44	
W-834-T3	6/10/08	324.96	607.58	
W-834-T3	9/11/08	325.34	607.2	
W-834-T3	12/3/08	325.52	607.02	
W-834-T5	1/29/08	77.12	853.85	
W-834-T5	6/16/08	77.16	853.81	
W-834-T5	9/11/08	77.35	853.62	
W-834-T5	12/3/08	77.16	853.81	
W-834-T7A	1/29/08	76.7	843.18	
W-834-T7A	6/16/08	76.67	843.21	
W-834-T7A	9/11/08	76.84	843.04	
W-834-T7A	12/3/08	-	NA	DRY
W-834-T8A	1/29/08	-	NA	DRY
W-834-T8A	6/3/08	-	NA	DRY
W-834-T8A	9/8/08	-	NA	DRY
W-834-T9	1/29/08	-	NA	DRY
W-834-T9	9/8/08	-	NA	DRY
W-834-T9	11/20/08	-	NA	DRY
W-834-U1	1/28/08	14.53	997.73	CB
W-834-U1	6/2/08	22.94	989.32	CB
W-834-U1	9/9/08	24.3	987.96	CB
W-834-U1	11/20/08	25.58	986.68	CB

C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
BC6-10	1/31/08	28.73	658.82	
BC6-10	6/4/08	27.66	659.89	
BC6-10	9/15/08	28.1	659.45	
BC6-10	11/6/08	28.46	659.09	
BC6-13	1/31/08	-	NA	DRY
BC6-13	6/4/08	-	NA	DRY
BC6-13	9/15/08	-	NA	DRY
BC6-13	11/6/08	-	NA	DRY
CARNRW1	1/31/08	32.7	646.03	
CARNRW1	6/4/08	52.02	626.71	
CARNRW1	9/15/08	95.48	583.25	
CARNRW1	11/6/08	52.66	626.07	
CARNRW2	1/31/08	-	NA	NM/NA
CARNRW2	6/4/08	-	NA	NM/RA
CARNRW2	9/15/08	-	NA	NM/RA
CARNRW2	11/6/08	-	NA	NM/RA
CARNRW3	1/31/08	36.1	666.9	
CARNRW3	6/4/08	46.28	656.72	
CARNRW3	9/15/08	44.69	658.31	
CARNRW3	11/6/08	47.91	655.09	
CARNRW4	1/31/08	7.58	644.17	
CARNRW4	6/4/08	8.65	643.1	
CARNRW4	9/15/08	13.15	638.6	
CARNRW4	11/6/08	15.26	636.49	
EP6-06	1/31/08	29.87	658.24	
EP6-06	6/4/08	28.06	660.05	
EP6-06	9/15/08	28.35	659.76	
EP6-06	11/6/08	28.31	659.8	
EP6-07	1/31/08	55.66	651.89	
EP6-07	6/4/08	66.34	641.21	
EP6-07	9/15/08	71.22	636.33	
EP6-07	11/6/08	58.16	649.39	
EP6-08	1/31/08	57.2	651.21	
EP6-08	6/4/08	59	649.41	
EP6-08	9/15/08	61.35	647.06	
EP6-08	11/6/08	61.41	647	
EP6-09	1/31/08	30.4	663.88	
EP6-09	6/4/08	30.05	664.23	
EP6-09	9/15/08	30.15	664.13	
EP6-09	11/6/08	30.46	663.82	
K6-01	1/31/08	27.6	664.01	
K6-01	6/4/08	27.25	664.21	
K6-01	9/15/08	27.23	664.23	
K6-01	11/6/08	27.47	663.99	

C-3. Pit 6 Landfill Operable Unit ground water elevations.

K6-01S	1/31/08	28.65	663.87	
K6-01S	6/4/08	28.33	664.19	
K6-01S	9/15/08	28.39	664.13	
K6-01S	11/6/08	28.56	663.96	
K6-03	1/31/08	75.15	651.6	
K6-03	6/4/08	85.34	641.21	
K6-03	9/15/08	90.19	636.36	
K6-03	11/6/08	-	NA	DRY
K6-04	1/31/08	56	652.32	
K6-04	6/4/08	65.46	642.71	
K6-04	9/15/08	66.56	641.61	
K6-04	11/6/08	66.42	641.75	
K6-14	1/31/08	21.85	659.02	
K6-14	6/4/08	21.8	659.07	
K6-14	9/15/08	23.2	657.67	
K6-14	11/6/08	24.05	656.82	
K6-15	1/31/08	-	NA	DRY
K6-15	6/4/08	-	NA	DRY
K6-15	9/15/08	-	NA	DRY
K6-15	11/6/08	-	NA	DRY
K6-16	1/31/08	17.38	662.07	
K6-16	6/4/08	18.43	661.02	
K6-16	9/15/08	18.93	660.52	
K6-16	11/6/08	19.02	660.43	
K6-17	1/31/08	21.5	657.21	
K6-17	6/4/08	20.74	657.97	
K6-17	9/15/08	25.05	653.66	
K6-17	11/6/08	24.72	653.99	
K6-18	1/31/08	24.6	661	
K6-18	6/4/08	24.68	660.92	
K6-18	9/15/08	24.98	660.62	
K6-18	11/6/08	25.1	660.19	
K6-19	1/31/08	29.6	663.44	
K6-19	6/4/08	29.28	663.79	
K6-19	9/15/08	29.36	663.71	
K6-19	11/6/08	29.64	663.43	
K6-21	1/31/08	-	NA	DRY
K6-21	6/4/08	-	NA	DRY
K6-21	9/15/08	-	NA	DRY
K6-21	11/6/08	-	NA	DRY
K6-22	1/31/08	35.65	645.88	
K6-22	6/4/08	35.49	646.04	
K6-22	9/15/08	35.74	645.79	
K6-22	11/6/08	-	NA	NM
K6-23	1/31/08	24.2	656.69	
K6-23	6/4/08	23.8	657.18	
K6-23	9/15/08	24.33	656.65	

C-3. Pit 6 Landfill Operable Unit ground water elevations.

K6-23	11/6/08	24.48	656.5	
K6-24	1/31/08	36.13	650.8	
K6-24	6/4/08	42.71	644.22	
K6-24	9/15/08	-	NA	DRY
K6-24	11/6/08	-	NA	DRY
K6-25	1/31/08	18.6	661.15	
K6-25	6/4/08	18.85	660.9	
K6-25	9/15/08	19.18	660.57	
K6-25	11/6/08	19.33	660.42	
K6-26	1/31/08	35.9	651.43	
K6-26	6/4/08	46.37	640.96	
K6-26	9/15/08	51.12	636.21	
K6-26	11/6/08	52.67	634.66	
K6-27	1/31/08	37	650.19	
K6-27	6/4/08	48.4	638.79	
K6-27	9/15/08	52.88	634.31	
K6-27	11/6/08	54.27	632.92	
K6-32	1/31/08	-	NA	DRY
K6-32	6/4/08	-	NA	DRY
K6-32	9/15/08	-	NA	DRY
K6-32	11/6/08	-	NA	DRY
K6-33	1/31/08	35.8	646.44	
K6-33	6/4/08	51.75	630.49	
K6-33	9/15/08	51.9	630.34	
K6-33	11/6/08	51.92	630.32	
K6-34	1/31/08	56.7	646.58	
K6-34	6/4/08	80.18	623.1	
K6-34	9/15/08	78.54	624.74	
K6-34	11/6/08	80.55	622.73	
K6-35	1/31/08	41.3	651.66	
K6-35	6/4/08	52	640.96	
K6-35	9/15/08	56.75	636.21	
K6-35	11/6/08	58.41	634.55	
K6-36	1/31/08	-	NA	DRY/CB
K6-36	6/4/08	38.62	651.76	CB
K6-36	9/15/08	38.6	651.78	CB
K6-36	11/6/08	38.64	651.74	CB
W-33C-01	1/10/08	12.9	639.61	
W-33C-01	6/4/08	11.78	640.73	
W-33C-01	9/15/08	18.02	634.49	
W-33C-01	11/6/08	20.05	632.46	
W-34-01	1/10/08	-	NA	NM/UC
W-34-01	6/4/08	9.5	674.96	
W-34-01	9/17/08	10.06	674.4	
W-34-01	11/6/08	10.58	673.88	
W-34-02	1/10/08	-	NA	NM/UC
W-34-02	6/4/08	37.46	647.4	

C-3. Pit 6 Landfill Operable Unit ground water elevations.

W-34-02	9/17/08	41.62	643.24
W-34-02	11/6/08	43.26	641.6
W-PIT6-1819	1/31/08	70.65	645.22
W-PIT6-1819	6/4/08	92.94	622.93
W-PIT6-1819	9/15/08	90.65	625.22
W-PIT6-1819	11/6/08	94.19	621.68

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
GALLO1	1/10/08	-	NA	NM
GALLO1	6/12/08	-	NA	NM
GALLO1	9/17/08	-	NA	NM
GALLO1	11/10/08	-	NA	NM
W-35B-01	1/14/08	18.85	504.17	
W-35B-01	6/24/08	16.46	506.56	
W-35B-01	8/26/08	18.7	504.32	
W-35B-01	11/10/08	19.22	503.8	
W-35B-02	1/14/08	18.8	504.23	
W-35B-02	6/24/08	15.65	507.38	
W-35B-02	8/26/08	17.83	505.2	
W-35B-02	11/10/08	18.72	504.31	
W-35B-03	1/14/08	17.6	505.5	
W-35B-03	6/24/08	15.02	508.08	
W-35B-03	8/26/08	17.09	506.01	
W-35B-03	11/10/08	17.57	505.53	
W-35B-04	1/14/08	12.2	516.76	
W-35B-04	6/24/08	3.98	524.98	
W-35B-04	8/26/08	11.23	517.73	
W-35B-04	11/10/08	11.56	517.4	
W-35B-05	1/14/08	12.1	516.63	
W-35B-05	6/24/08	3.67	525.06	
W-35B-05	8/26/08	11.3	517.43	
W-35B-05	11/10/08	11.38	517.35	
W-35C-01	1/14/08	2	540.68	
W-35C-01	6/19/08	0.14	541.58	
W-35C-01	8/26/08	1.57	540.15	
W-35C-02	1/14/08	52.1	520.7	
W-35C-02	6/18/08	57.8	515	
W-35C-02	8/26/08	56.11	516.69	
W-35C-02	11/3/08	85.42	487.38	
W-35C-04	1/14/08	75.4	456.32	
W-35C-04	6/9/08	65.2	466.52	
W-35C-04	8/27/08	80.33	451.39	
W-35C-04	11/3/08	74.4	457.32	
W-35C-05	1/14/08	25.1	506.03	
W-35C-05	6/9/08	21.83	509.3	
W-35C-05	8/19/08	21.69	509.44	
W-35C-05	11/3/08	22.2	508.93	
W-35C-06	1/14/08	26	505.73	
W-35C-06	6/9/08	20.05	511.68	
W-35C-06	8/19/08	23.27	508.46	
W-35C-06	11/3/08	24.93	506.8	
W-35C-07	1/14/08	4.53	527.61	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35C-07	6/9/08	0.35	531.79	
W-35C-07	8/27/08	0.49	531.65	
W-35C-07	11/3/08	2.49	529.65	
W-35C-08	1/14/08	25.9	506.39	
W-35C-08	6/9/08	19.59	512.7	
W-35C-08	8/19/08	22.4	509.89	
W-35C-08	11/3/08	24.37	507.92	
W-4A	1/14/08	6.5	523.97	
W-4A	6/24/08	2.73	527.74	
W-4A	8/20/08	6.4	524.07	
W-4A	11/3/08	6.14	524.33	
W-4AS	1/14/08	8.95	522.7	
W-4AS	6/24/08	9.93	521.72	
W-4AS	8/20/08	8.82	522.83	
W-4AS	11/3/08	8.74	522.91	
W-4B	1/14/08	5.5	524.84	
W-4B	6/9/08	1.57	528.63	
W-4B	8/19/08	1.26	528.94	
W-4B	11/3/08	4.05	526.15	
W-4C	1/14/08	9	520.78	
W-4C	6/9/08	4.82	524.96	
W-4C	8/19/08	10.05	519.73	
W-4C	11/3/08	7.49	522.29	
W-6BD	1/10/08	25.2	508.07	
W-6BD	6/9/08	-	NA	NM
W-6BD	8/27/08	22.33	510.94	
W-6BD	11/3/08	23.91	509.36	
W-6BS	1/10/08	25	508.23	
W-6BS	6/6/08	18.77	514.46	
W-6BS	8/27/08	22.26	510.97	
W-6BS	11/3/08	23.65	509.58	
W-6CD	1/10/08	30.6	549.44	
W-6CD	6/18/08	29.77	550.27	
W-6CD	8/26/08	30.35	549.69	
W-6CD	11/3/08	31.01	549.03	
W-6CI	1/10/08	30.35	550.16	
W-6CI	6/18/08	29.05	551.46	
W-6CI	8/25/08	30.42	550.09	
W-6CI	11/3/08	31.35	549.16	
W-6CS	1/10/08	28	551.68	
W-6CS	6/18/08	29.66	550.02	
W-6CS	8/25/08	30.37	549.31	
W-6CS	11/3/08	30.6	549.08	
W-6EI	1/10/08	5.35	525.97	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-6EI	6/9/08	0.46	530.86	
W-6EI	8/19/08	5.29	526.03	
W-6EI	11/3/08	5.34	525.98	
W-6ER	1/10/08	74.8	458.47	
W-6ER	6/10/08	6.61	526.66	
W-6ER	8/27/08	72.59	458.98	
W-6ER	11/3/08	-	NA	NM/RA
W-6ES	1/10/08	26	505.49	
W-6ES	6/9/08	20.08	511.41	
W-6ES	8/19/08	23.2	508.29	
W-6ES	11/3/08	24.84	506.65	
W-6F	1/10/08	60.2	558.66	
W-6F	6/18/08	59.49	559.37	
W-6F	11/3/08	61.35	557.51	
W-6G	1/10/08	60.2	559.72	
W-6G	6/18/08	54.9	565.02	
W-6G	8/26/08	60.52	559.4	
W-6G	11/3/08	61.85	558.07	
W-6H	1/10/08	-	NA	NM/UC
W-6H	6/18/08	-	NA	NM/UC
W-6H	11/3/08	-	NA	NM/UC
W-6I	1/10/08	-	NA	NM/UC
W-6I	6/18/08	-	NA	NM/UC
W-6I	8/26/08	29.56	531.73	
W-6I	11/3/08	-	NA	NM/UC
W-6J	1/10/08	-	NA	NM/UC
W-6J	6/19/08	7.3	554.06	
W-6J	8/26/08	8.2	553.16	
W-6K	1/10/08	3	530.84	
W-6K	6/6/08	0.64	533.2	
W-6K	8/19/08	2.85	530.99	
W-6K	11/3/08	2.85	530.99	
W-6L	1/10/08	1.9	532.01	
W-6L	6/6/08	2.67	531.24	
W-6L	8/19/08	1.7	532.21	
W-6L	11/3/08	0.72	533.19	
W-806-06A	1/30/08	-	NA	NM/UC
W-806-06A	6/24/08	-	NA	NM/UC
W-806-06A	9/30/08	-	NA	NM/UC
W-806-06A	11/3/08	-	NA	NM/UC
W-806-07	1/30/08	-	NA	NM/UC
W-806-07	6/24/08	-	NA	NM/UC
W-806-07	9/30/08	-	NA	NM/UC
W-806-07	11/3/08	-	NA	NM/UC

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-808-01	1/30/08	50.82	851.19	
W-808-01	6/24/08	-	NA	DRY
W-808-01	9/25/08	49.89	852.12	
W-808-01	12/9/08	50.41	851.6	
W-808-02	1/30/08	-	NA	DRY
W-808-02	6/24/08	-	NA	DRY
W-808-02	9/25/08	-	NA	DRY
W-808-02	12/9/08	-	NA	DRY
W-808-03	1/30/08	295.92	606.97	
W-808-03	6/24/08	295.84	607.05	
W-808-03	9/25/08	296.53	606.36	
W-808-03	12/9/08	296.56	606.33	
W-809-01	1/30/08	67.1	723.13	
W-809-01	6/24/08	68.25	721.98	
W-809-01	9/25/08	68.25	721.98	
W-809-01	12/9/08	68.25	721.98	
W-809-02	1/30/08	141	650.82	
W-809-02	6/24/08	139.63	652.19	
W-809-02	12/9/08	140.94	650.88	
W-809-03	1/30/08	101.8	644.27	
W-809-03	6/24/08	100.75	645.32	
W-809-03	9/25/08	101.04	645.03	
W-809-03	12/9/08	101.46	644.61	
W-809-04	1/30/08	60.35	715.7	
W-809-04	6/24/08	-	NA	DRY/MUD
W-809-04	9/25/08	-	NA	DRY
W-809-04	12/9/08	74.29	701.76	
W-810-01	1/30/08	239.15	601.88	
W-810-01	6/24/08	239.43	601.6	
W-810-01	9/25/08	240.99	600.04	
W-810-01	12/9/08	241.11	599.92	
W-814-01	1/14/08	109.85	698.98	
W-814-01	6/19/08	110.4	698.43	
W-814-01	9/18/08	110.6	698.23	
W-814-01	12/8/08	110.04	698.79	
W-814-02	1/14/08	158.9	634.78	
W-814-02	6/19/08	57.36	736.32	
W-814-02	9/18/08	157.74	635.94	
W-814-02	11/8/08	157.84	635.84	
W-814-03	1/14/08	-	NA	DRY
W-814-03	6/19/08	-	NA	DRY
W-814-03	9/18/08	-	NA	DRY
W-814-03	11/8/08	-	NA	DRY
W-814-04	1/14/08	235.65	579.04	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-814-04	6/19/08	236.34	578.35	
W-814-04	9/18/08	237.43	577.26	
W-814-04	12/8/08	235.6	578.82	
W-814-2134	1/14/08	60	732.89	
W-814-2134	6/19/08	74.1	720.79	
W-814-2134	9/18/08	91.05	703.84	
W-814-2134	11/8/08	-	NA	NM
W-814-2138	1/14/08	97.95	694.96	
W-814-2138	6/19/08	98.04	696.87	
W-814-2138	9/18/08	98.2	696.71	
W-814-2138	12/8/08	97.77	697.14	
W-815-01	1/30/08	-	NA	DRY
W-815-01	6/24/08	-	NA	DRY
W-815-01	9/25/08	-	NA	DRY
W-815-01	12/9/08	-	NA	DRY
W-815-02	1/30/08	104.1	617.51	
W-815-02	6/24/08	100.73	620.88	
W-815-02	9/25/08	99.55	622.06	
W-815-02	12/9/08	101.32	620.29	
W-815-03	1/30/08	42.55	679.91	
W-815-03	6/24/08	-	NA	DRY
W-815-03	9/25/08	-	NA	DRY
W-815-04	1/30/08	91.7	630.95	
W-815-04	6/24/08	95.8	626.85	
W-815-04	9/25/08	96.54	626.11	
W-815-04	11/9/08	95.14	627.51	
W-815-05	1/30/08	30.22	681.99	
W-815-05	6/24/08	34.52	677.69	
W-815-05	9/25/08	35.23	676.98	
W-815-05	11/9/08	34.8	677.41	
W-815-06	1/30/08	-	NA	NM/UC
W-815-06	6/19/08	129.35	626.43	
W-815-06	9/18/08	129.5	626.28	
W-815-06	11/8/08	129.5	626.28	
W-815-07	1/30/08	-	NA	NM/UC
W-815-07	6/19/08	137.59	624.9	
W-815-07	9/18/08	137.66	624.83	
W-815-07	12/8/08	137.59	624.9	
W-815-08	1/30/08	127	596.79	
W-815-08	6/24/08	127.42	596.37	
W-815-08	9/25/08	129.12	594.67	
W-815-08	12/9/08	129.86	593.93	
W-815-1918	1/30/08	42.75	702.86	
W-815-1918	6/24/08	43	702.61	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-815-1918	9/25/08	92.9	652.71	
W-815-1918	11/9/08	92.45	653.16	
W-815-1928	1/30/08	22.5	723.55	
W-815-1928	6/24/08	28.1	717.95	
W-815-1928	9/25/08	28.4	717.65	
W-815-1928	11/9/08	28.3	717.75	
W-815-2110	6/18/08	1.98	544.51	
W-815-2110	9/26/08	-0.64	547.13	MEASUREMENT ABOVE THE POM
W-815-2110	11/3/08	-0.12	546.61	MEASUREMENT ABOVE THE POM
W-815-2111	6/18/08	2.27	543.72	
W-815-2111	9/26/08	-0.87	546.86	MEASUREMENT ABOVE THE POM
W-815-2111	11/3/08	-	NA	NM
W-815-2217	6/18/08	29.37	550.55	
W-815-2217	9/26/08	33.17	546.75	
W-815-2217	11/3/08	31.1	548.82	
W-817-01	1/30/08	139.55	634.56	
W-817-01	6/24/08	-	NA	DRY
W-817-01	9/25/08	139.3	634.81	
W-817-01	12/9/08	138	636.11	
W-817-02	1/30/08	123.5	578.26	
W-817-02	6/24/08	-	NA	NM/RA
W-817-02	9/25/08	-	NA	NM/RA
W-817-02	11/9/08	-	NA	NM/RA
W-817-03	1/30/08	102.5	571.41	
W-817-03	6/24/08	102.71	571.2	
W-817-03	9/25/08	104.29	569.62	
W-817-03	12/9/08	102.17	571.74	
W-817-03A	1/30/08	5.65	672.35	
W-817-03A	6/24/08	11.47	666.53	
W-817-03A	9/25/08	7.37	670.63	
W-817-03A	12/9/08	6.96	671.04	
W-817-04	1/30/08	76.4	606.79	
W-817-04	6/24/08	75.82	607.22	
W-817-04	9/25/08	75.65	607.39	
W-817-04	12/9/08	75.79	607.25	
W-817-05	1/30/08	129.1	635.23	
W-817-05	6/24/08	128.75	635.58	
W-817-05	9/25/08	128.78	635.55	
W-817-05	12/9/08	129.24	635.09	
W-817-06A	1/30/08	101.6	666.86	
W-817-06A	6/24/08	78.35	690.11	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-817-06A	9/25/08	80.89	687.57	
W-817-06A	12/9/08	106.52	661.94	
W-817-07	1/30/08	96.4	571.55	
W-817-07	6/24/08	96.13	571.82	
W-817-07	9/25/08	97.05	570.9	
W-817-07	12/9/08	97.06	570.89	
W-817-2109	1/30/08	106.8	596.62	
W-817-2109	6/24/08	-	NA	NM/RA
W-817-2109	9/25/08	-	NA	NM/RA
W-817-2318	1/30/08	3.6	672.42	
W-817-2318	6/24/08	13.24	662.78	
W-817-2318	9/25/08	5.25	670.77	
W-817-2318	12/9/08	4.84	671.18	
W-818-01	1/14/08	97.92	582.85	
W-818-01	6/19/08	110.4	570.17	
W-818-01	9/18/08	95.72	584.85	
W-818-01	12/8/08	95.52	585.05	
W-818-03	1/14/08	58	540.87	
W-818-03	6/19/08	56.27	542.6	
W-818-03	9/18/08	58.2	540.67	
W-818-03	11/17/08	58.69	540.18	
W-818-04	1/14/08	65.9	548.16	
W-818-04	6/19/08	64.32	549.74	
W-818-04	9/18/08	66.59	547.47	
W-818-04	11/17/08	66.58	547.48	
W-818-06	1/14/08	70.62	542.9	
W-818-06	6/19/08	69.12	544.4	
W-818-06	9/18/08	71.4	542.12	
W-818-06	11/17/08	71.39	542.13	
W-818-07	1/14/08	70.6	543.61	
W-818-07	6/19/08	69.21	545	
W-818-07	9/18/08	71.37	542.84	
W-818-07	11/17/08	71.71	542.5	
W-818-08	1/14/08	103.45	545.45	
W-818-08	6/19/08	105.13	543.93	
W-818-08	9/18/08	104.72	544.34	
W-818-08	12/8/08	103	546.06	
W-818-09	1/14/08	101.6	539.3	
W-818-09	6/19/08	105.9	536	
W-818-09	9/18/08	114.96	526.94	
W-818-09	12/8/08	113.12	528.78	
W-818-11	1/14/08	149.85	599.82	
W-818-11	6/19/08	149.75	599.92	
W-818-11	9/18/08	149.83	599.84	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-818-11	12/8/08	149.65	600.02	
W-819-02	1/14/08	228.6	593.52	
W-819-02	6/19/08	229.33	592.49	
W-819-02	9/18/08	231.48	590.34	
W-819-02	12/8/08	231.79	590.03	
W-823-01	1/14/08	-	NA	NM/UC
W-823-01	6/19/08	-	NA	NM/UC
W-823-01	9/30/08	-	NA	NM/UC
W-823-01	11/8/08	-	NA	NM/UC
W-823-02	1/14/08	-	NA	NM/UC
W-823-02	6/19/08	-	NA	NM/UC
W-823-02	9/30/08	-	NA	NM/UC
W-823-02	11/8/08	-	NA	NM/UC
W-823-03	1/14/08	-	NA	NM/UC
W-823-03	6/19/08	-	NA	NM/UC
W-823-03	9/30/08	-	NA	NM/UC
W-823-03	11/8/08	-	NA	NM/UC
W-823-13	1/14/08	-	NA	NM/UC
W-823-13	6/19/08	-	NA	NM/UC
W-823-13	9/30/08	-	NA	NM/UC
W-823-13	11/8/08	-	NA	NM/UC
W-827-01	1/14/08	-	NA	DRY
W-827-01	6/26/08	-	NA	DRY
W-827-01	9/30/08	-	NA	DRY
W-827-01	12/9/08	-	NA	DRY
W-827-02	1/14/08	50.45	872.4	
W-827-02	6/26/08	55.46	867.39	
W-827-02	9/30/08	56.33	866.52	
W-827-02	12/9/08	53.47	869.38	
W-827-03	1/14/08	194.2	730.2	
W-827-03	6/26/08	193.6	730.8	
W-827-03	9/30/08	194.5	729.9	
W-827-03	12/9/08	197.74	726.66	
W-827-04	1/14/08	-	NA	DRY
W-827-04	6/26/08	-	NA	DRY
W-827-04	9/30/08	-	NA	DRY
W-827-04	12/9/08	-	NA	DRY
W-827-05	1/14/08	387.65	646.23	
W-827-05	6/26/08	-	NA	NM/NEEDS REPAIR
W-827-05	9/30/08	383.12	650.76	
W-827-05	12/9/08	383	650.88	
W-829-06	1/14/08	-	NA	NM/SEALED
W-829-06	6/24/08	100.71	971.58	
W-829-06	9/30/08	96.86	975.43	

C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-829-06	12/9/08	97.01	975.28	
W-829-08	1/14/08	93	981.75	
W-829-08	6/24/08	96.5	978.25	
W-829-08	9/30/08	98.78	975.97	
W-829-08	12/9/08	99	975.75	
W-829-15	1/14/08	337	697	
W-829-15	6/26/08	336.07	697.93	
W-829-15	9/30/08	336.92	697.08	
W-829-15	12/9/08	336.95	697.05	
W-829-1938	1/14/08	373.8	706.2	
W-829-1938	6/26/08	373.53	706.47	
W-829-1938	9/30/08	373.63	706.37	
W-829-1938	12/9/08	373.4	706.6	
W-829-1940	1/14/08	107.95	976.22	
W-829-1940	6/24/08	108.12	976.05	
W-829-1940	9/30/08	108.15	976.02	
W-829-1940	12/9/08	108.71	975.46	
W-829-22	1/14/08	399.95	653.12	
W-829-22	6/26/08	399.99	653.08	
W-829-22	9/30/08	400.44	652.63	
W-829-22	12/9/08	400.08	652.99	
WELL18	1/10/08	-	NA	NM
WELL18	6/12/08	-	NA	NM
WELL18	11/10/08	-	NA	NM/RA S300 WATER SUPPLY WELL
WELL20	1/10/08	-	NA	NM
WELL20	6/18/08	-	NA	NM
WELL20	11/10/08	-	NA	NM/RA S300 WATER SUPPLY WELL

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K1-01C	1/3/08	105.9	975.32	
K1-01C	6/30/08	106.04	975.9	
K1-01C	9/16/08	106.11	975.83	
K1-01C	12/4/08	106.39	975.55	
K1-02B	1/3/08	133.75	973.48	
K1-02B	6/16/08	134.4	972.83	
K1-02B	6/30/08	134.42	972.81	
K1-02B	12/4/08	-	NA	NM PORT IS BLOCKED
K1-03	1/3/08	124.8	983.25	
K1-03	6/30/08	128.96	979.09	
K1-03	9/16/08	130.6	977.45	
K1-03	12/4/08	132.09	975.96	
K1-04	1/3/08	155.1	967.57	
K1-04	6/30/08	155.74	966.93	
K1-04	9/16/08	155.55	967.12	
K1-04	12/4/08	155.95	966.72	
K1-05	1/3/08	170.2	960.66	
K1-05	6/30/08	170.74	960.12	
K1-05	9/16/08	170.6	960.26	
K1-05	12/4/08	170.86	960	
K1-06	1/3/08	113.65	975.89	
K1-06	6/30/08	114.22	975.32	
K1-06	9/16/08	114.29	975.25	
K1-06	12/8/08	114.53	975.01	
K1-07	1/3/08	139.9	969.73	
K1-07	6/30/08	140.52	969.11	
K1-07	9/16/08	140.53	969.1	
K1-07	12/4/08	140.74	968.89	
K1-08	1/3/08	154.6	968.14	
K1-08	6/30/08	154.75	967.99	
K1-08	9/16/08	154.7	968.04	
K1-08	12/4/08	155.04	967.7	
K1-09	1/3/08	161	965.68	
K1-09	6/30/08	-	NA	NM WASPS
K1-09	9/16/08	161.1	965.58	
K1-09	12/4/08	161.32	965.36	
K2-03	1/3/08	52.4	1014.24	
K2-03	6/30/08	-	NA	NM
K2-03	9/30/08	52.55	1014.09	
K2-03	12/4/08	52.74	1013.9	
K2-04D	1/3/08	25.55	1066.97	
K2-04D	6/30/08	25	1067.52	
K2-04D	9/22/08	27.37	1065.15	
K2-04D	12/4/08	28.58	1063.94	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K2-04S	1/3/08	24.95	1067	
K2-04S	6/30/08	23.76	1068.19	
K2-04S	9/22/08	26.52	1065.43	
K2-04S	12/4/08	27.59	1064.36	
NC2-05	1/3/08	51.1	983.81	
NC2-05	6/30/08	51.52	983.39	
NC2-05	9/16/08	51.8	983.11	
NC2-05	12/4/08	52.23	982.68	
NC2-05A	1/3/08	50.7	984.73	
NC2-05A	6/30/08	51.19	984.24	
NC2-05A	9/16/08	52.09	983.34	
NC2-05A	12/4/08	52.35	983.08	
NC2-06	1/3/08	48.55	984.99	
NC2-06	6/30/08	49.06	984.48	
NC2-06	9/30/08	49.41	984.13	
NC2-06	11/8/08	49.69	983.85	
NC2-06A	1/3/08	49.85	984.38	
NC2-06A	6/30/08	49.87	984.36	
NC2-06A	9/30/08	50.19	984.04	
NC2-06A	11/8/08	50.47	983.76	
NC2-09	1/3/08	50.8	984.67	
NC2-09	6/30/08	51.3	984.17	
NC2-09	9/30/08	51.85	983.62	
NC2-09	12/4/08	51.97	983.5	
NC2-10	1/3/08	63.6	976.49	
NC2-10	6/30/08	63.85	976.24	
NC2-10	9/16/08	64	976.09	
NC2-10	12/8/08	64.2	975.89	
NC2-11D	1/3/08	50.6	978.02	
NC2-11D	6/30/08	50.98	977.64	
NC2-11D	9/16/08	51.15	977.47	
NC2-11D	12/8/08	51.55	977.07	
NC2-11I	1/3/08	51	977.76	
NC2-11I	6/30/08	51.14	977.62	
NC2-11I	9/16/08	51.33	977.43	
NC2-11I	12/8/08	51.83	976.93	
NC2-11S	1/3/08	50.6	977.92	
NC2-11S	6/30/08	50.86	977.66	
NC2-11S	9/16/08	51.04	977.48	
NC2-11S	12/8/08	51.44	977.08	
NC2-12D	1/3/08	50	978.44	
NC2-12D	6/30/08	-	NA	NM
NC2-12D	9/16/08	50.1	978.34	
NC2-12D	12/8/08	50.53	977.91	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC2-12I	1/3/08	50	978.75	
NC2-12I	6/30/08	50.32	978.43	
NC2-12I	9/16/08	50.45	978.3	
NC2-12I	12/8/08	50.85	977.9	
NC2-12S	1/3/08	49.55	978.97	
NC2-12S	6/30/08	50.02	978.5	
NC2-12S	9/16/08	50.1	978.42	
NC2-12S	12/8/08	50.44	978.08	
NC2-13	1/3/08	43	978.5	
NC2-13	6/30/08	43.25	978.25	
NC2-13	9/16/08	43.4	978.1	
NC2-13	12/8/08	43.79	977.71	
NC2-14S	1/3/08	16.45	1057.45	
NC2-14S	6/30/08	14.79	1059.11	
NC2-14S	9/22/08	16.1	1057.8	
NC2-14S	12/4/08	16.67	1057.23	
NC2-15	1/3/08	79.75	993.71	
NC2-15	6/30/08	78.85	994.61	
NC2-15	9/30/08	80.23	993.23	
NC2-15	12/10/08	-	NA	NM/UC
NC2-16	1/3/08	24.45	1058.01	
NC2-16	6/30/08	23.28	1059.18	
NC2-16	9/22/08	24.35	1058.11	
NC2-16	12/4/08	24.93	1057.53	
NC2-17	1/3/08	104	985.49	
NC2-17	6/30/08	104.64	984.85	
NC2-17	9/30/08	105.03	984.46	
NC2-17	11/8/08	105.24	984.25	
NC2-18	1/3/08	74.05	1057.12	
NC2-18	6/30/08	72.64	1058.53	
NC2-18	9/22/08	74.1	1057.07	
NC2-18	12/8/08	75.09	1056.08	
NC2-19	1/3/08	109.15	983.24	
NC2-19	6/30/08	110.33	982.06	
NC2-19	9/16/08	110.35	982.04	
NC2-19	12/8/08	-	NA	NM/RA
NC2-20	1/3/08	35	967.27	
NC2-20	6/30/08	34.99	967.28	
NC2-20	9/16/08	35.27	967	
NC2-20	12/8/08	35.49	966.78	
NC2-21	1/3/08	34.85	967.29	
NC2-21	6/30/08	34.69	967.45	
NC2-21	9/16/08	35.01	967.13	
NC2-21	12/8/08	35.2	966.94	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-10	1/16/08	10.65	1215.65	
NC7-10	6/25/08	10.32	1215.98	
NC7-10	9/4/08	10.73	1215.57	
NC7-10	12/3/08	11.37	1214.93	
NC7-11	1/16/08	21	1223.39	
NC7-11	6/25/08	20.44	1223.95	
NC7-11	9/4/08	20.45	1223.94	
NC7-11	12/3/08	20.54	1223.85	
NC7-14	1/16/08	-	NA	DRY
NC7-14	6/25/08	-	NA	DRY
NC7-14	9/4/08	-	NA	DRY
NC7-14	12/3/08	-	NA	DRY
NC7-15	1/16/08	20.2	1249.21	
NC7-15	6/25/08	21.68	1247.73	
NC7-15	9/4/08	21.92	1247.49	
NC7-15	12/2/08	22.03	1247.38	
NC7-19	1/16/08	21.75	1241.23	
NC7-19	6/26/08	21.68	1241.3	
NC7-19	9/4/08	21.99	1240.99	
NC7-19	12/3/08	22.07	1240.91	
NC7-27	1/16/08	86.4	1196	
NC7-27	6/25/08	86.42	1195.98	
NC7-27	9/4/08	86.4	1196	
NC7-27	12/3/08	86.81	1195.59	
NC7-28	1/16/08	40.1	1259.43	
NC7-28	6/26/08	40.92	1258.61	
NC7-28	9/4/08	41.09	1258.44	
NC7-28	12/3/08	41.26	1258.27	
NC7-29	1/16/08	53.2	1201.54	
NC7-29	6/25/08	52.64	1202.1	
NC7-29	9/29/08	52.9	1201.84	
NC7-29	11/19/08	53.13	1201.61	
NC7-43	1/16/08	45	1245.18	
NC7-43	6/26/08	45.63	1244.55	
NC7-43	9/4/08	45.98	1244.2	
NC7-43	11/19/08	46.15	1244.03	
NC7-44	1/16/08	32.95	1323.18	
NC7-44	6/27/08	33.59	1322.54	
NC7-44	9/4/08	33.72	1322.41	
NC7-44	11/19/08	34.03	1322.1	
NC7-45	1/16/08	36	1152.69	
NC7-45	6/25/08	36.46	1152.23	
NC7-45	9/4/08	36.81	1151.88	
NC7-45	12/3/08	36.95	1151.74	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-46	1/16/08	23.8	1107.63	
NC7-46	6/25/08	23.64	1107.79	
NC7-46	9/22/08	23.83	1107.6	
NC7-46	12/4/08	23.98	1107.45	
NC7-54	1/16/08	12.05	1195.2	
NC7-54	6/27/08	-	NA	NM
NC7-54	9/3/08	-	NA	NM
NC7-54	12/10/08	-	NA	DRY
NC7-55	1/16/08	-	NA	DRY
NC7-55	6/25/08	-	NA	DRY
NC7-55	9/22/08	-	NA	DRY
NC7-55	12/4/08	-	NA	DRY
NC7-56	1/16/08	20.5	1111.67	
NC7-56	6/25/08	19.8	1112.37	
NC7-56	9/22/08	20.11	1112.06	
NC7-56	12/4/08	20.2	1111.97	
NC7-57	1/16/08	-	NA	DRY
NC7-57	6/25/08	-	NA	DRY
NC7-57	9/22/08	-	NA	DRY
NC7-57	11/4/08	-	NA	DRY
NC7-58	1/16/08	24	1082.73	
NC7-58	6/25/08	23.53	1083.2	
NC7-58	9/22/08	24.27	1082.46	
NC7-58	11/4/08	24.63	1082.1	
NC7-59	1/16/08	13.25	1102.51	
NC7-59	6/25/08	13.22	1102.09	
NC7-59	9/22/08	13.53	1101.78	
NC7-59	12/4/08	13.59	1101.72	
NC7-60	1/16/08	159.2	1168.42	
NC7-60	6/25/08	159.06	1168.56	
NC7-60	9/4/08	159	1168.62	
NC7-60	12/3/08	159.23	1168.39	
NC7-61	1/16/08	48.3	1231.07	
NC7-61	6/26/08	48.26	1231.11	
NC7-61	9/4/08	48.4	1230.97	
NC7-61	12/3/08	48.55	1230.82	
NC7-62	1/16/08	22.5	1102.61	
NC7-62	6/25/08	22.24	1102.87	
NC7-62	9/22/08	22.59	1102.52	
NC7-62	12/4/08	22.78	1102.33	
NC7-69	1/17/08	2.6	1249.86	
NC7-69	6/25/08	2.49	1249.97	
NC7-69	9/4/08	2.55	1249.91	
NC7-69	12/2/08	2.83	1249.63	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-70	1/16/08	34	1273.42	
NC7-70	6/26/08	34.5	1272.92	
NC7-70	9/4/08	34.83	1272.59	
NC7-70	12/3/08	35	1272.42	
NC7-71	1/16/08	56.7	1246.52	
NC7-71	6/26/08	56.32	1246.9	
NC7-71	9/4/08	56.83	1246.39	
NC7-71	12/3/08	57.14	1246.08	
NC7-72	1/16/08	32.4	1123.95	
NC7-72	6/25/08	32.31	1124.04	
NC7-72	9/22/08	32.69	1123.66	
NC7-72	12/4/08	32.8	1123.55	
NC7-73	1/16/08	28	1138.27	
NC7-73	6/25/08	27.68	1138.59	
NC7-73	9/22/08	28.05	1138.22	
NC7-73	12/4/08	28.15	1138.12	
NC7-76	1/16/08	22.4	1254.48	
NC7-76	6/26/08	22.97	1253.91	
NC7-76	9/4/08	23.27	1253.61	
NC7-76	12/2/08	23.43	1253.45	
W-850-05	1/8/08	29.55	1273.84	
W-850-05	6/26/08	33.21	1270.18	
W-850-05	9/4/08	32.04	1271.35	
W-850-05	12/3/08	32.15	1271.24	
W-850-2145	1/8/08	176.4	1030.57	
W-850-2145	6/30/08	176.28	1030.69	
W-850-2145	9/22/08	70.03	1136.94	
W-850-2145	12/8/08	70.6	1136.37	
W-850-2312	1/8/08	-	NA	NM/UC
W-850-2312	6/30/08	68.28	1063.68	
W-850-2312	9/22/08	70.03	1061.93	
W-850-2312	12/8/08	71.06	1060.9	
W-850-2313	1/8/08	160	1022.73	
W-850-2313	6/25/08	24.05	1158.68	
W-850-2313	9/4/08	24.3	1158.43	
W-850-2313	12/3/08	24.71	1158.02	
W-850-2314	1/8/08	158.38	1177.39	
W-850-2314	6/25/08	157.64	1178.13	
W-850-2314	9/4/08	156.5	1179.27	
W-850-2314	12/3/08	156.76	1179.01	
W-850-2315	1/8/08	53.35	1201.98	
W-850-2315	6/25/08	52.95	1202.38	
W-850-2315	9/29/08	53.27	1202.06	
W-850-2315	11/19/08	53.48	1201.85	

C-5. Building 850 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-850-2316	1/8/08	176.5	1030.62	
W-850-2316	6/30/08	176.54	1030.58	
W-850-2316	9/22/08	176.59	1030.53	
W-850-2316	12/8/08	176.81	1030.31	
W-850-2416	1/8/08	56	NA	
W-850-2416	6/26/08	50.45	NA	
W-850-2416	9/4/08	51.03	1250.87	
W-850-2416	12/3/08	50.84	1251.06	
W-850-2417	1/8/08	40	1262.06	
W-850-2417	6/26/08	41.34	1260.72	
W-850-2417	9/4/08	41.58	1260.48	
W-850-2417	12/3/08	41.71	1260.35	
W-865-1802	1/7/08	50.35	1018.7	
W-865-1802	6/30/08	49.72	1019.33	
W-865-1802	9/4/08	-	NA	NM
W-865-1802	12/4/08	50.55	1018.5	
W-865-1803	1/7/08	106	1073.99	
W-865-1803	6/30/08	104.54	1075.45	
W-865-1803	9/22/08	105.44	1074.55	
W-865-1803	12/4/08	105.56	1074.43	
W-865-2005	1/7/08	324.7	950.17	
W-865-2005	6/30/08	325.16	949.71	
W-865-2005	9/4/08	325.25	949.62	
W-865-2005	12/9/08	325.32	949.55	
W-PIT1-01	1/3/08	-	NA	DRY
W-PIT1-01	6/30/08	-	NA	DRY
W-PIT1-01	9/16/08	-	NA	DRY
W-PIT1-01	11/8/08	-	NA	DRY
W-PIT1-02	1/3/08	230.85	950.45	
W-PIT1-02	6/30/08	231.13	950.17	
W-PIT1-02	9/16/08	231.34	949.96	
W-PIT1-02	12/9/08	231.31	949.99	
W-PIT1-2209	1/3/08	213.1	952.95	
W-PIT1-2209	6/30/08	213.67	952.38	
W-PIT1-2209	9/16/08	213.95	952.1	
W-PIT1-2209	12/9/08	214	952.05	
W-PIT1-2225	1/3/08	-	NA	NM/UC
W-PIT1-2225	6/30/08	224.56	968.58	
W-PIT1-2225	9/30/08	225	968.14	
W-PIT7-16	1/16/08	21	1250	
W-PIT7-16	6/26/08	21.22	1249.78	
W-PIT7-16	9/4/08	21.35	1249.65	
W-PIT7-16	12/2/08	21.69	1249.31	

C-6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-01	1/8/08	217.2	1118.95	
W-854-01	5/29/08	27.72	1308.43	
W-854-01	9/30/08	217.74	1118.41	
W-854-01	11/13/08	218.2	1117.95	
W-854-02	1/8/08	148	1186.27	CB
W-854-02	6/3/08	145.14	1189.13	CB
W-854-02	9/30/08	145.13	1189.14	CB
W-854-02	11/13/08	145.21	1189.06	CB
W-854-03	1/8/08	118	1122.53	
W-854-03	6/3/08	118	1122.53	
W-854-03	9/29/08	119.15	1121.38	
W-854-03	11/13/08	119.22	1121.31	
W-854-04	1/8/08	297.2	942.89	
W-854-04	5/29/08	296.67	943.42	
W-854-04	9/30/08	296.55	943.54	
W-854-04	11/13/08	296.94	943.15	
W-854-05	1/8/08	89.7	1242.34	
W-854-05	5/20/08	89.6	1242.44	
W-854-05	9/30/08	89.7	1242.34	
W-854-05	11/13/08	889.61	442.43	
W-854-06	1/8/08	118	992.45	
W-854-06	5/29/08	118.3	992.15	
W-854-06	9/29/08	118.3	992.15	
W-854-06	11/13/08	118.08	992.37	
W-854-07	1/8/08	117.15	993.71	
W-854-07	5/29/08	117.6	993.26	
W-854-07	9/29/08	117.45	993.41	
W-854-07	11/13/08	117.56	993.3	
W-854-08	1/8/08	119.4	1156.8	
W-854-08	6/2/08	119.9	1156.3	
W-854-08	9/30/08	120	1156.2	
W-854-08	11/13/08	120.1	1156.1	
W-854-09	1/8/08	187.45	1173.76	
W-854-09	6/2/08	187.8	1173.41	
W-854-09	9/30/08	-	NA	NM/RA
W-854-09	11/13/08	188.89	1172.32	
W-854-10	1/8/08	116	1210.38	CB
W-854-10	6/2/08	115.2	1211.18	CB
W-854-10	9/30/08	115.59	1210.79	CB
W-854-10	11/13/08	115.44	1210.94	
W-854-11	1/8/08	-	NA	DRY/CB
W-854-11	6/2/08	-	NA	DRY/CB
W-854-11	9/30/08	-	NA	DRY/CB
W-854-11	11/13/08	-	NA	DRY/CB

C-6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-12	1/8/08	226.3	1030.49	
W-854-12	6/3/08	226.95	1029.84	
W-854-12	9/30/08	-	NA	NM/RA
W-854-13	1/8/08	-	NA	DRY
W-854-13	6/3/08	104.5	1152.67	
W-854-13	9/30/08	-	NA	NM/RA
W-854-13	11/13/08	-	NA	NM/RA
W-854-14	1/8/08	-	NA	DRY/CB
W-854-14	6/3/08	65.32	938.38	
W-854-14	9/29/08	64.8	938.9	
W-854-14	11/13/08	64.87	938.83	
W-854-15	1/8/08	76.5	1055.5	CB
W-854-15	6/3/08	76.1	1055.9	
W-854-15	9/29/08	76.35	1055.65	
W-854-15	11/13/08	-	NA	NM
W-854-17	1/8/08	143.95	1192.19	
W-854-17	6/3/08	143.43	1192.71	
W-854-17	9/30/08	149.2	1186.94	
W-854-17	11/13/08	-	NA	NM
W-854-1701	1/8/08	240.8	1009.52	
W-854-1701	6/5/08	240.52	1009.8	
W-854-1701	9/29/08	240.51	1009.81	
W-854-1701	11/13/08	240.83	1009.49	
W-854-1706	1/8/08	-	NA	NM/UC
W-854-1706	6/5/08	-	NA	DRY
W-854-1706	9/29/08	-	NA	DRY
W-854-1706	11/17/08	16.27	816.54	
W-854-1707	1/8/08	-	NA	NM/UC
W-854-1707	6/5/08	26.85	805.36	
W-854-1707	9/29/08	28.25	803.96	
W-854-1707	11/17/08	28.44	803.77	
W-854-1731	1/8/08	65	938.49	CB
W-854-1731	6/3/08	64.78	938.71	
W-854-1731	9/29/08	62.25	941.24	
W-854-1731	11/13/08	62.33	941.16	
W-854-1822	1/8/08	145.15	1042.31	
W-854-1822	6/5/08	145.37	1042.09	
W-854-1822	9/29/08	145.37	1042.09	
W-854-1822	11/13/08	145.75	1041.71	
W-854-1823	1/8/08	54.25	1100.01	
W-854-1823	6/3/08	54.95	1099.31	
W-854-1823	9/30/08	55.27	1098.99	
W-854-1823	11/13/08	55.38	1098.88	
W-854-1834	1/8/08	-	NA	DRY/CB

C-6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-1834	6/3/08	-	NA	DRY
W-854-1834	9/30/08	-	NA	DRY
W-854-1834	11/13/08	-	NA	DRY
W-854-1835	1/8/08	-	NA	NM/SEALED
W-854-1835	6/3/08	-	NA	NM/SEALED
W-854-1835	9/30/08	-	NA	NM/SEALED
W-854-1835	11/13/08	-	NA	NM SEALED
W-854-18A	1/8/08	141	1194.9	
W-854-18A	6/5/08	140.77	1195.13	
W-854-18A	9/30/08	143.93	1191.97	
W-854-18A	11/13/08	145.13	1190.77	
W-854-19	1/8/08	-	NA	DRY
W-854-19	6/3/08	-	NA	DRY
W-854-19	6/5/08	-	NA	DRY
W-854-19	9/30/08	-	NA	DRY
W-854-19	11/13/08	-	NA	DRY
W-854-1902	1/8/08	147.4	1040.88	
W-854-1902	6/5/08	147.14	1041.14	
W-854-1902	9/29/08	147.34	1040.94	
W-854-1902	11/13/08	147.7	1040.58	
W-854-2115	1/8/08	118	993.7	
W-854-2115	6/5/08	117.96	993.74	
W-854-2115	9/29/08	118.05	993.65	
W-854-2115	11/13/08	118.09	993.61	
W-854-2139	1/8/08	119.15	992.53	
W-854-2139	6/5/08	118.53	993.15	
W-854-2139	9/29/08	118.54	993.14	
W-854-2139	11/13/08	119.32	992.36	
W-854-2218	1/8/08	147.4	1187.3	
W-854-2218	6/5/08	145.67	1189.03	
W-854-2218	9/30/08	148.11	1186.59	
W-854-2218	11/13/08	147.45	1187.25	
W-854-45	1/8/08	89.55	908.34	
W-854-45	6/4/08	88.73	909.16	
W-854-45	9/29/08	88.53	909.36	
W-854-45	11/13/08	88.51	909.38	
W-854-F2	1/8/08	-	NA	DRY
W-854-F2	6/5/08	-	NA	DRY
W-854-F2	9/30/08	-	NA	DRY
W-854-F2	11/13/08	-	NA	DRY

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
SVI-830-031	1/30/08	24.13	668.2	CB
SVI-830-031	6/17/08	24.1	668.23	CB
SVI-830-031	9/18/08	23.63	668.7	CB
SVI-830-031	12/3/08	22	670.33	
SVI-830-032	1/30/08	-	NA	DRY
SVI-830-032	6/17/08	31.07	661.33	
SVI-830-032	9/18/08	29.65	662.75	
SVI-830-032	12/3/08	28.49	663.91	
SVI-830-033	1/30/08	24	668.35	
SVI-830-033	6/17/08	23.72	668.63	
SVI-830-033	9/18/08	23.1	669.25	
SVI-830-033	12/3/08	22.4	669.95	
SVI-830-035	1/30/08	19.43	672.93	
SVI-830-035	6/17/08	21.2	671.16	
SVI-830-035	9/18/08	19.33	673.03	
SVI-830-035	12/3/08	19.08	673.28	
W-830-04A	1/14/08	46.95	577.15	
W-830-04A	6/16/08	48.81	575.29	
W-830-04A	9/11/08	49.6	574.5	
W-830-04A	11/17/08	47.11	576.99	
W-830-05	1/15/08	25.2	559.17	
W-830-05	6/16/08	27.43	556.94	
W-830-05	9/15/08	27.25	557.12	
W-830-05	11/17/08	26.12	558.25	
W-830-07	1/14/08	-	NA	DRY
W-830-07	6/17/08	33.07	601.73	
W-830-07	9/18/08	-	NA	DRY
W-830-07	11/17/08	-	NA	DRY
W-830-09	1/30/08	107.95	587.81	
W-830-09	6/16/08	108.89	586.87	
W-830-09	9/11/08	112.15	583.61	
W-830-09	12/3/08	113.43	582.33	
W-830-10	1/15/08	19.2	577.5	
W-830-10	6/16/08	21.65	575.05	
W-830-10	9/15/08	23.05	573.65	
W-830-10	11/17/08	19.87	576.83	
W-830-11	1/15/08	33.2	562.99	
W-830-11	6/16/08	36.26	559.93	
W-830-11	9/15/08	37.28	558.91	
W-830-11	11/17/08	35.6	560.59	
W-830-12	1/30/08	96.75	595.87	
W-830-12	6/16/08	95.96	596.66	
W-830-12	9/11/08	97.24	595.38	
W-830-12	12/3/08	97.33	595.29	

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-13	1/15/08	30.2	534.31	
W-830-13	6/16/08	28.9	535.61	
W-830-13	9/15/08	32.33	532.18	
W-830-13	11/17/08	31.56	532.95	
W-830-14	1/15/08	19.8	545.7	
W-830-14	6/16/08	20.3	545.2	
W-830-14	9/15/08	20.65	544.85	
W-830-14	11/17/08	20.46	545.04	
W-830-15	1/15/08	1.65	563.44	CB
W-830-15	6/16/08	3.45	561.64	CB
W-830-15	9/15/08	6.59	558.5	CB
W-830-15	11/17/08	-	NA	NM/CB
W-830-16	1/15/08	98.9	571.98	
W-830-16	6/17/08	98.95	571.93	
W-830-16	9/17/08	99.8	571.08	
W-830-16	11/17/08	97.55	573.33	
W-830-17	1/15/08	108.05	566.64	
W-830-17	6/17/08	108.18	566.51	
W-830-17	9/17/08	108.95	565.74	
W-830-17	11/17/08	108.93	565.76	
W-830-1730	1/15/08	24.65	523.45	
W-830-1730	6/17/08	24.53	523.57	
W-830-1730	8/19/08	24.84	523.26	
W-830-1730	11/5/08	24.85	523.25	
W-830-18	1/15/08	65.8	588.69	
W-830-18	6/16/08	72.59	581.9	
W-830-18	9/11/08	76.5	577.99	
W-830-18	11/17/08	77.46	577.03	
W-830-1807	1/30/08	28.4	666.57	
W-830-1807	6/16/08	38.5	656.47	
W-830-1807	9/11/08	-	NA	NM/RA
W-830-1807	11/5/08	-	NA	NM/RA
W-830-1829	1/30/08	54.65	605.86	
W-830-1829	6/16/08	53.72	606.79	
W-830-1829	9/11/08	-	NA	DRY
W-830-1829	12/3/08	-	NA	DRY
W-830-1830	1/30/08	55.5	605.5	
W-830-1830	6/16/08	55.02	605.98	
W-830-1830	9/11/08	55.4	605.6	
W-830-1830	12/3/08	55.2	605.8	
W-830-1831	1/15/08	169.6	575.11	
W-830-1831	6/17/08	168.25	576.46	
W-830-1831	9/18/08	170.2	574.51	
W-830-1831	11/17/08	167.81	576.9	

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-1832	1/15/08	160.35	589.52	
W-830-1832	6/17/08	156.02	593.85	
W-830-1832	9/18/08	169.65	580.22	
W-830-1832	11/17/08	170.39	579.48	
W-830-19	1/30/08	39.81	615.73	
W-830-19	6/16/08	39.37	616.17	
W-830-19	9/11/08	44.65	610.89	
W-830-19	12/3/08	39.25	616.29	
W-830-20	1/15/08	18.3	578.66	
W-830-20	6/16/08	20.45	576.51	
W-830-20	9/15/08	22.82	574.14	
W-830-20	11/17/08	22.41	574.55	
W-830-21	1/15/08	68.8	585.14	
W-830-21	6/16/08	67.57	586.37	
W-830-21	9/11/08	69.6	584.34	
W-830-21	11/17/08	69.64	584.3	
W-830-22	1/30/08	52	603.02	CB
W-830-22	6/16/08	51.58	603.44	CB
W-830-22	9/11/08	52.2	602.82	CB
W-830-22	12/3/08	51.93	603.09	
W-830-2213	1/15/08	-	NA	DRY
W-830-2213	6/16/08	66.96	588.93	
W-830-2213	9/11/08	-	NA	DRY
W-830-2213	11/17/08	-	NA	DRY
W-830-2214	1/15/08	75.4	580.25	
W-830-2214	6/16/08	66.46	589.19	
W-830-2214	9/11/08	-	NA	WATER LEVEL BELOW SP
W-830-2214	11/17/08	83.84	571.81	
W-830-2215	1/15/08	65.9	589.91	
W-830-2215	6/16/08	74.15	581.66	
W-830-2215	9/11/08	78.05	577.76	PUMPING
W-830-2215	11/17/08	78.92	576.89	
W-830-2216	1/15/08	16	536.67	
W-830-2216	6/16/08	17.51	535.15	
W-830-2216	9/15/08	23.74	528.93	
W-830-2216	11/17/08	-	NA	NM/RA
W-830-2311	1/15/08	23.1	575.2	
W-830-2311	6/16/08	23.37	574.93	
W-830-2311	9/15/08	24.73	573.57	
W-830-2311	11/17/08	21.65	576.65	
W-830-25	1/30/08	-	NA	DRY
W-830-25	6/16/08	-	NA	DRY
W-830-25	9/11/08	-	NA	DRY

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-25	11/17/08	-	NA	DRY
W-830-26	1/30/08	72.91	585.62	
W-830-26	6/16/08	74.42	584.11	
W-830-26	9/11/08	-	NA	DRY
W-830-26	12/3/08	-	NA	DRY
W-830-27	1/30/08	35.25	589.01	
W-830-27	6/16/08	32.6	591.92	
W-830-27	9/11/08	-	NA	DRY
W-830-28	1/30/08	39.56	585.3	
W-830-28	6/16/08	40.92	583.94	
W-830-28	9/11/08	44.96	579.9	
W-830-28	11/17/08	45.89	578.97	
W-830-29	1/30/08	66.3	594.73	CB
W-830-29	6/16/08	90.88	570.15	CB
W-830-29	9/11/08	92.94	568.09	CB
W-830-29	12/3/08	92.53	568.5	
W-830-30	1/30/08	14.8	677.71	
W-830-30	6/16/08	16.7	675.81	
W-830-30	9/11/08	14.84	677.67	
W-830-30	12/3/08	14.45	678.06	
W-830-34	1/30/08	17.2	675.15	CB
W-830-34	6/16/08	18.23	674.12	CB
W-830-34	9/11/08	17.44	674.91	CB
W-830-34	12/3/08	17.29	675.06	
W-830-49	1/30/08	-	NA	NM/SEALED
W-830-49	6/16/08	-	NA	NM/SEALED
W-830-49	9/11/08	-	NA	NM/SEALED
W-830-49	12/3/08	-	NA	NM/RA SEALED
W-830-50	1/15/08	31.7	577.44	
W-830-50	6/16/08	34.12	575.02	
W-830-50	9/15/08	35.5	573.64	
W-830-50	11/17/08	32.42	576.72	
W-830-51	1/15/08	-	NA	FL
W-830-51	6/16/08	-	NA	FL
W-830-51	9/18/08	-0.09	570.87	FL
W-830-51	11/17/08	-	NA	NM NO PROBE ACCESS AT WELLHEAD/EQUIP IN WELL
W-830-52	1/15/08	-	NA	FL
W-830-52	6/16/08	1.59	571.79	
W-830-52	9/18/08	2.99	570.39	

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-52	11/17/08	-	NA	NM NO PROBE ACCESS AT WELLHEAD/EQUIP IN WELL
W-830-53	1/15/08	-	NA	FL
W-830-53	6/17/08	1.5	574.57	
W-830-53	9/18/08	2.32	573.75	
W-830-54	1/15/08	55.8	547.22	
W-830-54	6/17/08	56.63	546.39	
W-830-54	9/15/08	58.07	544.95	
W-830-54	11/17/08	58.36	544.66	
W-830-55	1/15/08	88	576.04	
W-830-55	6/17/08	90.24	573.8	
W-830-55	9/18/08	91.25	572.79	
W-830-55	11/17/08	88.62	575.42	
W-830-56	1/15/08	31.35	545.47	
W-830-56	6/16/08	31.18	545.64	
W-830-56	9/15/08	31.57	545.25	
W-830-56	11/17/08	31.37	545.45	
W-830-57	1/30/08	55.45	584.42	
W-830-57	6/16/08	54.81	584.38	
W-830-57	9/11/08	60.2	578.99	
W-830-57	11/17/08	60.57	578.62	
W-830-58	1/30/08	26.25	606.83	
W-830-58	6/16/08	24.7	608.17	
W-830-58	9/11/08	25.1	607.77	
W-830-58	11/17/08	24.89	607.98	
W-830-59	1/30/08	55	611.11	
W-830-59	6/16/08	59.65	606.46	
W-830-59	9/11/08	59.2	606.91	
W-830-59	12/3/08	59.58	606.53	
W-830-60	1/15/08	44	593.39	
W-830-60	6/16/08	53.86	583.53	
W-830-60	9/11/08	57.7	579.69	
W-830-60	11/17/08	58.78	578.61	
W-831-01	1/31/08	131.9	641.59	
W-831-01	6/16/08	131.89	641.6	
W-831-01	9/10/08	132.22	641.27	
W-831-01	12/3/08	132.4	641.09	
W-832-01	1/31/08	29.85	676.21	
W-832-01	6/16/08	33.1	672.96	
W-832-01	9/10/08	33.69	672.37	
W-832-01	12/3/08	32.55	673.51	
W-832-09	1/31/08	73.3	633.92	

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-09	6/16/08	73.12	634.1	
W-832-09	9/10/08	73.25	633.97	
W-832-09	12/3/08	73.55	633.67	
W-832-10	1/31/08	30.3	655.85	
W-832-10	6/16/08	36.56	649.59	
W-832-10	9/10/08	36.6	649.55	
W-832-10	12/3/08	36.5	649.65	
W-832-11	1/31/08	31.2	667.45	
W-832-11	6/16/08	32.36	666.29	
W-832-11	9/10/08	32.52	666.13	
W-832-11	12/3/08	33.3	665.35	
W-832-12	1/31/08	23.8	697.67	CB
W-832-12	6/16/08	23.92	697.55	CB
W-832-12	9/10/08	13.3	708.17	CB
W-832-12	12/3/08	23.77	697.7	
W-832-13	1/31/08	20.3	702.36	CB
W-832-13	6/16/08	20.83	701.83	CB
W-832-13	9/10/08	21.1	701.56	CB
W-832-13	12/3/08	-	NA	DRY
W-832-14	1/31/08	-	NA	DRY
W-832-14	6/16/08	-	NA	DRY
W-832-14	9/10/08	-	NA	DRY
W-832-14	12/3/08	-	NA	NM SVE OFF
W-832-15	1/31/08	22.75	698.13	CB
W-832-15	6/16/08	-	NA	DRY/CB
W-832-15	9/10/08	22.6	698.28	CB
W-832-15	12/3/08	20.1	700.78	
W-832-16	1/31/08	17.9	702.84	CB
W-832-16	6/16/08	-	NA	DRY/CB
W-832-16	9/10/08	-	NA	DRY/CB
W-832-17	1/31/08	-	NA	DRY/CB
W-832-17	6/16/08	-	NA	DRY/CB
W-832-17	9/10/08	18.6	703.4	CB
W-832-17	12/3/08	-	NA	NM SVE OFF
W-832-18	1/31/08	25.3	695.9	
W-832-18	6/16/08	-	NA	DRY
W-832-18	9/10/08	-	NA	DRY
W-832-18	12/3/08	-	NA	NM SVE OFF
W-832-19	1/31/08	-	NA	DRY/CB
W-832-19	6/16/08	24.67	695.35	CB
W-832-19	9/10/08	-	NA	DRY/CB
W-832-19	12/3/08	-	NA	NM SVE OFF
W-832-1927	1/31/08	233.95	592.05	
W-832-1927	6/16/08	-	NA	NM

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-1927	9/18/08	233.65	592.35	
W-832-1927	12/3/08	233.91	592.09	
W-832-20	1/31/08	-	NA	DRY/CB
W-832-20	6/16/08	-	NA	DRY/CB
W-832-20	9/10/08	-	NA	DRY/CB
W-832-20	12/3/08	-	NA	NM SVE OFF
W-832-21	1/31/08	-	NA	DRY
W-832-21	6/16/08	-	NA	DRY
W-832-21	9/10/08	-	NA	DRY
W-832-21	12/3/08	-	NA	NM SVE OFF
W-832-2112	1/15/08	65.2	588.89	
W-832-2112	6/19/08	67.1	586.99	
W-832-2112	9/18/08	69.9	584.19	
W-832-2112	12/8/08	70.16	583.93	
W-832-22	1/31/08	-	NA	DRY/CB
W-832-22	6/16/08	-	NA	DRY/CB
W-832-22	9/10/08	-	NA	DRY/CB
W-832-22	12/3/08	-	NA	NM SVE OFF
W-832-23	1/15/08	32.6	687.54	CB
W-832-23	6/16/08	32.16	687.98	CB
W-832-23	9/10/08	32.55	687.59	CB
W-832-23	12/3/08	33.26	686.88	
W-832-24	1/15/08	39.7	622.86	
W-832-24	6/17/08	40.54	621.95	
W-832-24	9/10/08	41	621.49	
W-832-24	12/3/08	31.72	630.77	
W-832-25	1/15/08	41.75	625.06	
W-832-25	9/10/08	39.75	627.06	
W-832-25	12/3/08	-	NA	DRY
W-832-SC1	1/15/08	-	NA	DRY
W-832-SC1	6/17/08	-	NA	DRY
W-832-SC1	9/15/08	-	NA	DRY
W-832-SC1	11/17/08	6.96	577.74	
W-832-SC2	1/15/08	-	NA	DRY
W-832-SC2	6/17/08	-	NA	DRY
W-832-SC2	9/15/08	-	NA	DRY
W-832-SC2	11/17/08	-	NA	DRY
W-832-SC3	1/15/08	-	NA	DRY
W-832-SC3	6/17/08	-	NA	DRY
W-832-SC3	9/15/08	-	NA	DRY
W-832-SC3	11/17/08	6.76	556.91	
W-832-SC4	1/15/08	7	530.3	
W-832-SC4	6/17/08	8.27	529.03	
W-832-SC4	9/15/08	7.04	530.26	

C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-SC4	11/17/08	-	NA	DRY
W-870-01	1/10/08	-	NA	DRY
W-870-01	6/9/08	-	NA	DRY
W-870-01	9/10/08	-	NA	DRY
W-870-01	11/3/08	-	NA	DRY
W-870-02	1/10/08	18	505.82	CB
W-870-02	6/9/08	16.52	507.3	CB
W-870-02	9/10/08	17.8	506.02	CB
W-870-02	11/3/08	19	504.82	CB
W-880-01	1/10/08	17.7	508.35	
W-880-01	6/9/08	15.9	510.15	
W-880-01	8/19/08	17.5	508.55	
W-880-01	11/3/08	17.9	508.15	
W-880-02	1/10/08	18.1	507.7	
W-880-02	6/9/08	17.1	508.7	
W-880-02	9/10/08	18.62	507.18	
W-880-02	12/16/08	18.84	506.96	
W-880-03	1/10/08	0.55	525.5	
W-880-03	6/9/08	1.06	524.99	
W-880-03	8/19/08	6.28	519.77	
W-880-03	11/3/08	3.79	522.26	

C-8. Building 801 firing table and Pit 8 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K8-01	1/3/08	-	NA	NM/UC
K8-01	6/30/08	-	NA	NM
K8-01	9/30/08	131.4	969.04	
K8-01	12/8/08	131.55	968.89	
K8-02B	1/3/08	-	NA	NM/UC
K8-02B	6/30/08	-	NA	NM
K8-02B	9/30/08	160.75	967.37	
K8-02B	12/8/08	160.73	967.39	
K8-03B	1/3/08	105.2	970.38	
K8-03B	6/30/08	-	NA	NM
K8-03B	9/30/08	106.02	969.56	
K8-03B	12/8/08	-	NA	NM/RA
K8-04	1/3/08	-	NA	NM/UC
K8-04	6/30/08	-	NA	NM
K8-04	9/30/08	165.7	967.15	
K8-04	12/8/08	165.64	967.21	
K8-05	1/3/08	-	NA	NM/UC
K8-05	6/30/08	-	NA	NM
K8-05	9/30/08	-	NA	DRY
K8-05	11/8/08	-	NA	DRY

C-9. Building 845 firing table and Pit 9 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K9-01	1/3/08	78.6	996.91	
K9-01	6/30/08	78.43	997.08	
K9-01	9/16/08	78.49	997.02	
K9-01	11/12/08	-	NA	NM/RA AREA CLOSED
K9-01	12/29/08	78.61	996.9	
K9-02	1/3/08	-	NA	NM/UC
K9-02	6/30/08	128.7	1006.69	
K9-02	9/16/08	128.8	1006.59	
K9-02	11/12/08	-	NA	NM/RA AREA CLOSED
K9-02	12/29/08	129.01	1006.38	
K9-03	1/3/08	-	NA	NM/UC
K9-03	6/30/08	119.84	997.24	
K9-03	9/16/08	119.65	997.43	
K9-03	11/12/08	-	NA	NM/RA AREA CLOSED
K9-03	12/29/08	120	997.08	
K9-04	1/3/08	-	NA	NM/UC
K9-04	6/30/08	91.05	993.27	
K9-04	9/16/08	90.69	993.63	
K9-04	11/12/08	-	NA	NM/RA AREA CLOSED
K9-04	12/20/08	90.36	993.96	

C-10. Building 833 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-833-03	1/15/08	-	NA	DRY
W-833-03	6/17/08	-	NA	DRY
W-833-03	8/25/08	-	NA	DRY
W-833-03	12/3/08	-	NA	DRY
W-833-12	1/15/08	-	NA	DRY
W-833-12	6/17/08	-	NA	DRY
W-833-12	8/25/08	-	NA	DRY
W-833-12	12/3/08	-	NA	DRY
W-833-18	1/29/08	33.72	810.18	
W-833-18	6/17/08	-	NA	DRY
W-833-18	9/11/08	-	NA	DRY
W-833-18	12/3/08	-	NA	DRY
W-833-22	1/15/08	-	NA	DRY
W-833-22	6/17/08	-	NA	DRY
W-833-22	8/25/08	-	NA	DRY
W-833-28	1/15/08	-	NA	DRY
W-833-28	6/17/08	-	NA	DRY
W-833-28	8/25/08	41.95	813.97	
W-833-28	12/3/08	-	NA	DRY
W-833-30	1/15/08	283.2	568.46	
W-833-30	6/17/08	279.89	571.77	
W-833-30	8/25/08	281.29	570.37	
W-833-30	12/3/08	-	NA	NM PROBE STUCK
W-833-33	1/15/08	-	NA	DRY
W-833-33	6/17/08	-	NA	DRY
W-833-33	8/25/08	-	NA	DRY
W-833-33	12/3/08	-	NA	DRY
W-833-34	1/15/08	-	NA	DRY
W-833-34	6/17/08	-	NA	DRY
W-833-34	8/25/08	-	NA	DRY
W-833-34	12/3/08	-	NA	DRY
W-833-43	1/29/08	-	NA	DRY
W-833-43	6/17/08	-	NA	DRY
W-833-43	9/11/08	-	NA	DRY
W-833-43	12/3/08	-	NA	DRY
W-840-01	1/10/08	-	NA	DRY
W-840-01	6/17/08	-	NA	NM
W-840-01	9/25/08	118.85	578.23	
W-840-01	11/20/08	-	NA	NM/UC POOR ROAD CONDITIONS
W-841-01	1/10/08	-	NA	DRY
W-841-01	6/17/08	-	NA	DRY
W-841-01	9/25/08	-	NA	DRY
W-841-01	11/20/08	-	NA	DRY

C-11. Building 851 Firing Table ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-851-05	1/28/08	139.8	1131.99	
W-851-05	6/26/08	139.3	1132.49	
W-851-05	9/29/08	139.22	1132.57	
W-851-05	11/19/08	139.54	1132.25	
W-851-06	1/28/08	133.2	1132.3	
W-851-06	6/26/08	132.59	1132.91	
W-851-06	9/29/08	132.6	1132.9	
W-851-06	11/19/08	-	NA	NM/RA
W-851-07	1/28/08	140	1131.59	
W-851-07	6/26/08	139.07	1132.52	
W-851-07	9/29/08	138.95	1132.64	
W-851-07	11/19/08	139.31	1132.28	
W-851-08	1/28/08	183.2	1089.12	
W-851-08	6/26/08	182.41	1089.91	
W-851-08	9/29/08	182.46	1089.86	
W-851-08	11/19/08	182.79	1089.53	

Appendix D

Building 834 T2 Area *In Situ* Bioremediation Monitoring Data

Appendix D

Building 834 T2 Area *In Situ* Bioremediation Monitoring Data

D-1. Results of light hydrocarbon monitoring for the Building 834 T2 Area bioremediation treatability Study.

Sample Location	Sample Date	Ethane (μg/L)	Ethene (μg/L)	Methane (μg/L)
W-834-1825	7/9/08	0.14	0.26	2.4
W-834-1825	11/11/08	0.74	82	7,300
W-834-1833	7/9/08	0.027	0.15	0.94
W-834-1833	11/11/08	0.048	0.16	1.1
W-834-T2	7/9/08	0.88	2.8	2,300
W-834-T2	11/11/08	1.3	1,300	2,300

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

D-2. Results of oxygen-reduction potential (ORP) monitoring for the Building 834 T2 Area bioremediation treatability Study.

Date	W-834-1825 (mv)	W-834-1833 (mv)	W-834-T2 (mv)	W-834-T2A (mv)
7/4/08	-197.0	60.8	-274.4	–
7/9/08	-427.0	54.7	-263.5	420.8
7/16/08	-458.4	36.6	-253.8	–
7/23/08	-462.4	7.8	-245.7	430.3
7/29/08	-291.7	-4.9	-230.0	–
8/5/08	-460.3	7.3	-221.7	434.8
8/13/08	-441.9	11.5	-302.5	436.7
8/20/08	-373.7	3.9	-357.8	437.3
8/28/08	-395.2	0.5	-355.8	436.2
8/29/08	-174.9	33.4	-86.1	181.3
9/8/08	-380.8	31.6	-362.7	144.2
9/16/08	-363.3	11.7	-458.0	142.7
9/23/08	-349.4	7.4	-483.0	136.0
9/30/08	-348.2	34.6	-487.9	401.0
10/8/08	-349.5	47.6	-490.0	415.7
10/15/08	-349.5	52.0	-489.8	422.1
10/22/08	-349.9	50.7	-488.5	394.9
10/29/08	-351.5	343.0	-486.2	421.8
11/11/08	-349.4	361.4	-484.4	14.2
11/13/08	-159.7	77.0	-24.2	92.2
11/19/08	-317.0	54.7	-458.3	-43.0
11/24/08	-333.6	62.5	-479.6	-49.6
12/1/08	-342.0	61.7	-485.0	-56.7
12/8/08	-347.0	50.9	-485.2	-46.4
12/15/08	-364.6	40.9	-484.6	-37.0
12/23/08	-365.5	38.8	-483.8	-30.8
12/29/08	-367.4	68.5	-484.8	-20.7

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

Appendix E

California Native Plant Society

Inventory of Rare and Endangered Plant List

and

U.S. Fish & Wildlife Service

Sacramento Office Species List

Appendix E

California Native Plant Society
Inventory of Rare and Endangered Plant List
and
U.S. Fish & Wildlife Service
Sacramento Office Species List

Appendix E-1. CNPS Inventory of Rare and Endangered Plants.
Appendix E-2. Sacramento Fish & Wildlife Office Species List.

CNPS Inventory of Rare and Endangered Plants

Status: Plant Press Manager window with 38 items - Thu, Feb. 12, 2009 09:07 c

Reformat list as: Standard List - with Plant Press controls

ECOLOGICAL REPORT

scientific	family	life form	blooming	communities	elevation	CNPS
Allium sharsmithiae	Liliaceae	perennial bulbiferous herb	Mar-May	•Chaparral (Chprl) •Cismontane woodland (CmWld)/serpentinite, rocky	400 - 1200 meters	List 1B.3
Amsinckia grandiflora	Boraginaceae	annual herb	Apr-May	•Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)	275 - 550 meters	List 1B.1
Amsinckia lunaris	Boraginaceae	annual herb	Mar-Jun	•Coastal bluff scrub (CBScr) •Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)	3 - 500 meters	List 1B.2
Astragalus tener var. tener	Fabaceae	annual herb	Mar-Jun	•Playas (Plyas) •Valley and foothill grassland (VFGrs) (adobe clay) •Vernal pools (VnPls)/alkaline	1 - 60 meters	List 1B.2
Atriplex cordulata	Chenopodiaceae	annual herb	Apr-Oct	•Chenopod scrub (ChScr) •Meadows and seeps (Medws) •Valley and foothill grassland (VFGrs) (sandy)/saline or alkaline	1 - 375 meters	List 1B.2
Atriplex depressa	Chenopodiaceae	annual herb	Apr-Oct	•Chenopod scrub (ChScr) •Meadows and seeps (Medws) •Playas (Plyas) •Valley and foothill grassland (VFGrs) •Vernal pools (VnPls)/alkaline, clay	1 - 320 meters	List 1B.2
Atriplex joaquiniana	Chenopodiaceae	annual herb	Apr-Oct	•Chenopod scrub (ChScr) •Meadows and seeps (Medws) •Playas (Plyas) •Valley and foothill grassland (VFGrs)/alkaline	1 - 835 meters	List 1B.2
Balsamorhiza macrolepis var. macrolepis	Asteraceae	perennial herb	Mar-Jun	•Chaparral (Chprl) •Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)/sometimes serpentinite	90 - 1400 meters	List 1B.2
					30 -	

Blepharizonia plumosa	Asteraceae	annual herb	Jul-Oct	•Valley and foothill grassland (VFGrs)	505 meters	List 1B.1
California macrophylla	Geraniaceae	annual herb	Mar-May	•Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)/clay	15 - 1200 meters	List 1B.1
Campanula exigua	Campanulaceae	annual herb	May-Jun	•Chaparral (Chprl) (rocky, usually serpentinite)	275 - 1250 meters	List 1B.2
Caulanthus coulteri var. lemmonii	Brassicaceae	annual herb	Mar-May	•Pinyon and juniper woodland (PJWld) •Valley and foothill grassland (VFGrs)	80 - 1220 meters	List 1B.2
Centromadia parryi ssp. congdonii	Asteraceae	annual herb	May-Oct (Nov) Months in parentheses are uncommon.	•Valley and foothill grassland (VFGrs) (alkaline)	1 - 230 meters	List 1B.2
Cirsium fontinale var. campylon	Asteraceae	perennial herb	(Feb) Apr-Oct Months in parentheses are uncommon.	•Chaparral (Chprl) •Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)/serpentinite seeps	100 - 890 meters	List 1B.2
Cordylanthus mollis ssp. hispidus	Scrophulariaceae	annual herb hemiparasitic	Jun-Sep	•Meadows and seeps (Medws) •Playas (Plyas) •Valley and foothill grassland (VFGrs)/alkaline	1 - 155 meters	List 1B.1
Cordylanthus palmatus	Scrophulariaceae	annual herb hemiparasitic	May-Oct	•Chenopod scrub (ChScr) •Valley and foothill grassland (VFGrs)/alkaline	5 - 155 meters	List 1B.1
Coreopsis hamiltonii	Asteraceae	annual herb	Mar-May	•Cismontane woodland (CmWld) (rocky)	550 - 1300 meters	List 1B.2
Deinandra bacigalupii	Asteraceae	annual herb	Jun-Oct	•Meadows and seeps (Medws)(alkaline)	150 - 185 meters	List 1B.2
Delphinium californicum ssp. interius	Ranunculaceae	perennial herb	Apr-Jun	•Chaparral (Chprl) (openings) •Cismontane woodland (CmWld) (mesic)	230 - 1095 meters	List 1B.2
Delphinium recurvatum	Ranunculaceae	perennial herb	Mar-Jun	•Chenopod scrub (ChScr) •Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)/alkaline	3 - 750 meters	List 1B.2
Eschscholzia rhombipetala	Papaveraceae	annual herb	Mar-Apr	•Valley and foothill grassland (VFGrs) (alkaline, clay)	0 - 975 meters	List 1B.1
Fritillaria falcata	Liliaceae	perennial bulbiferous herb	Mar-May	•Chaparral (Chprl) •Cismontane woodland (CmWld) •Lower montane coniferous forest (LCFrs)/serpentinite,	300 - 1525 meters	List 1B.2

				often talus		
Helianthella castanea	Asteraceae	perennial herb	Mar-Jun	•Broadleafed upland forest (BUFrs) •Chaparral (Chprl) •Cismontane woodland (CmWld) •Coastal scrub (CoScr) •Riparian woodland (RpWld) •Valley and foothill grassland (VFGrs)	60 - 1300 meters	List 1B.2
Hesperolinon serpentinum	Linaceae	annual herb	May-Jul	•Chaparral (Chprl) (serpentinite)	50 - 800 meters	List 1B.1
Hibiscus lasiocarpus	Malvaceae	perennial rhizomatous herb emergent	Jun-Sep	•Marshes and swamps (MshSw) (freshwater)	0 - 120 meters	List 2.2
Lasthenia conjugens	Asteraceae	annual herb	Mar-Jun	•Cismontane woodland (CmWld) •Playas (Plyas) (alkaline) •Valley and foothill grassland (VFGrs) •Vernal pools (VnPls)/mesic	0 - 470 meters	List 1B.1
Legenere limosa	Campanulaceae	annual herb	Apr-Jun	•Vernal pools (VnPls)	1 - 880 meters	List 1B.1
Lilaeopsis masonii	Apiaceae	perennial rhizomatous herb	Apr-Nov	•Marshes and swamps (MshSw) (brackish or freshwater) •Riparian scrub (RpScr)	0 - 10 meters	List 1B.1
Limosella subulata	Scrophulariaceae	perennial stoloniferous herb	May-Aug	•Marshes and swamps (MshSw)	0 - 3 meters	List 2.1
Madia radiata	Asteraceae	annual herb	Mar-May	•Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)	25 - 900 meters	List 1B.1
Malacothamnus hallii	Malvaceae	perennial evergreen shrub	May-Sep (Oct) Months in parentheses are uncommon.	•Chaparral (Chprl) •Coastal scrub (CoScr)	10 - 760 meters	List 1B.2
Micropus amphibolus	Asteraceae	annual herb	Mar-May	•Broadleafed upland forest (BUFrs) •Chaparral (Chprl) •Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs)/rocky	45 - 825 meters	List 3.2
Myosurus minimus ssp. apus	Ranunculaceae	annual herb	Mar-Jun	•Valley and foothill grassland (VFGrs) •Vernal pools (VnPls) (alkaline)	20 - 640 meters	List 3.1
Plagiobothrys glaber	Boraginaceae	annual herb	Mar-May	•Meadows and seeps (Medws)(alkaline) •Marshes and swamps (MshSw) (coastal salt)	15 - 180 meters	List 1A

Senecio aphanactis	Asteraceae	annual herb	Jan-Apr	•Chaparral (Chprl) •Cismontane woodland (CmWld) •Coastal scrub (CoScr)/sometimes alkaline	15 - 800 meters	List 2.2
Symphyotrichum lentum	Asteraceae	perennial rhizomatous herb	May-Nov	•Marshes and swamps (MshSw) (brackish and freshwater)	0 - 3 meters	List 1B.2
Trifolium depauperatum var. hydrophilum	Fabaceae	annual herb	Apr-Jun	•Marshes and swamps (MshSw) •Valley and foothill grassland (VFGrs) (mesic, alkaline) •Vernal pools (VnPls)	0 - 300 meters	List 1B.2
Tropidocarpum capparideum	Brassicaceae	annual herb	Mar-Apr	•Valley and foothill grassland (VFGrs) (alkaline hills)	1 - 455 meters	List 1B.1

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 090211115535

Database Last Updated: January 29, 2009

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta longiantenna

Critical habitat, longhorn fairy shrimp (X)

longhorn fairy shrimp (E)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Euphydryas editha bayensis

bay checkerspot butterfly (T)

Lepidurus packardi

vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Hypomesus transpacificus

Critical habitat, delta smelt (X)

delta smelt (T)

Oncorhynchus mykiss

Central California Coastal steelhead (T) (NMFS)

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana aurora draytonii

California red-legged frog (T)

Critical habitat, California red-legged frog (X)

Reptiles

Masticophis lateralis euryxanthus

Alameda whipsnake [=striped racer] (T)

Critical habitat, Alameda whipsnake (X)

Thamnophis gigas

giant garter snake (T)

Birds

Sternula antillarum (=Sterna, =albifrons) browni

California least tern (E)

Mammals

Vulpes macrotis mutica

San Joaquin kit fox (E)

Plants

Amsinckia grandiflora

Critical habitat, large-flowered fiddleneck (X)

large-flowered fiddleneck (E)

Cordylanthus palmatus

palmate-bracted bird's-beak (E)

Lasthenia conjugens

Contra Costa goldfields (E)

Critical habitat, Contra Costa goldfields (X)

Proposed Species

Amphibians

Rana aurora draytonii

Critical habitat, California red-legged frog (PX)

Quads Containing Listed, Proposed or Candidate Species:

TRACY (444B)

LONE TREE CREEK (444C)

MIDWAY (445A)

ALTAMONT (445B)

MENDENHALL SPRINGS (445C)

CEDAR MTN. (445D)

UNION ISLAND (462C)

BYRON HOT SPRINGS (463C)

CLIFTON COURT FOREBAY (463D)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service.

Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 12, 2009.

Appendix F

Literature Evaluation of Ecological Significance for Newly Detected Constituents of Potential Ecological Concern

Ammonia

In natural aquatic systems, ammonia exists in a pH- and temperature-dependent equilibrium between the unionized form (NH_3) and the charged ammonium ion (NH_4^+). 'Total ammonia' is a measurement of the sum of NH_3 and NH_4^+. In the environment, ammonia is oxidized to nitrite and then to nitrate, a process that may occur in aerobic systems by the action of *Nitrosomonas* and *Nitrobacter* bacteria (Russo, 1985). Ammonia enters the environment from multiple sources. It is a waste product of protein metabolism in mammals, and is also a breakdown product of other nitrogen-containing organic matter (Russo, 1985). It is a waste product of coke plants, metallurgic operations, chemical synthesis (nitric acid, synthetic monomers, and plastics), and ammonium nitrate explosive production (Wilkes University, 1999).

The uncharged ammonia molecule is significantly more toxic than the ammonium ion, as it is able to diffuse across cellular membranes more readily (U.S. EPA, 1999). Ammonia toxicity varies with pH and temperature, as both of these parameters affect the form of ammonia which predominates in a given solution. In general, at higher pH levels (more basic solutions), toxicity is higher than in more acidic solutions because the concentration of NH_3 is higher (Russo, 1985; U.S. EPA, 1999). Higher temperatures also favor the formation of NH_3 (Russo, 1985; U.S. EPA, 1999).

In aquatic species such as fish, the mechanism(s) of action of ammonia toxicity is not fully characterized but includes altered amino acid metabolism, and disruption of neurotransmitters and electrochemistry of skeletal muscle (Randall and Tsiu, 2002; Gupta, 2007). Fish are highly susceptible to the effects of ammonia, with lethal concentration (LC) 50 concentrations (i.e., 48 or 96-hour concentrations that were lethal to half of the test population) as low as 0.08 miligrams per liter (mg/L) (reviewed in Russo, 1985). Ammonia is clearly toxic to benthic and aquatic invertebrates, but the mechanism(s) of action are not known. Lethal concentrations of 1.2 mg/L (Cladocerans) and 8.0 mg/L (Riffle beetle) have been reported (Russo, 1985). In a comparative study of aquatic invertebrates, Hickey et al. (1999) identified a 29-day effective concentration (EC) 50 (effective concentration for 50% of the population) of 2.15 mg (N)/L based on decreases in abundance, with a no observed effect concentration of 0.95 mg (N)/L.

For ammonia present in surface water at Site 300, the principal route of exposure to aquatic and benthic invertebrates (the ecological receptors of concern) is via ingestion (filtration). Information on the extent or significance of these exposure routes is not available, but toxicity data (see previous text) indicates that sufficient quantities can be absorbed by invertebrates to be biologically significant. No invertebrate surveys of springs have been completed at Site 300, and because of this, it is not possible to extrapolate toxic concentrations of ammonia determined in various non-resident invertebrate species to those that may be present in springs at LLNL. However, ammonia nitrogen, measured as nitrogen (N), has been detected in Spring 4 (Operable Unit [OU] 7) at a concentration of 8.7 mg/L - a value that exceeds the ecological screening level (ESL of 1.71 mg (N)/L at 20ºC, U.S. EPA, 1999). The ammonia concentration also substantially exceeds lethal concentrations of ammonia identified in experimental systems (see Russo, 1985; Hickey et al., 1999). However, identification of ammonia as a chemical of potential ecological concern in Spring 4 is based on a single sample;

consequently, there are not sufficient data to conclude that ammonia levels in the spring pose a hazard to invertebrates. However, if subsequent sampling confirms the presence of ammonia at persistently high levels, then an ecological hazard may exist.

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Chloride

Major sources of chloride in surface waters are deicing salt, urban and agricultural runoff, and discharges from municipal wastewater plants, industrial plants, and the drilling of oil and gas wells (Birge et al., 1985; Dickman and Gochnauer, 1978; Sonzogni et al., 1983 as cited in U.S. EPA, 1988). Anthropogenic sources of chloride are a concern to freshwater species.

The chlorides of potassium, calcium, and magnesium are generally more acutely toxic to aquatic species than sodium chloride when compared on the basis of mg chloride/L (Biesenger and Christensen, 1972; Dowden, 1961; Dowden and Bennett, 1965; Hamilton et al., 1975; Patrick et al., 1968; Trama, 1954 as cited in U.S. EPA, 1988). There are only sufficient data for sodium chloride, which was used by the U.S. EPA as the basis for deriving a water quality criterion (1988). Further, it appears likely that most anthropogenic chloride in ambient water is associated with sodium, rather than potassium, calcium or magnesium (Dickman and Gochnauer, 1978; Sonzogni et al., 1983).

The literature for acute toxicity of chloride to freshwater aquatic species is based on 24- and 48-hour tests rather than 96-hour tests as specified in U.S. EPA guidelines, however, the use of such tests is considered acceptable because changes in the acute values from 24 to 48 to 96 hours were negligible. Based on tests conducted using sodium chloride, the acute sensitivities of freshwater species to chloride ranged from 1,470 mg/L for *Daphnia pulex* to 11,490 mg/L for the American eel. Invertebrate species were generally more sensitive than vertebrate species. Test results from a variety of species indicate that if freshwater animals do not die within the first 24 hours of a test, they likely will not die during periods ranging from 48 hours to 11 days. There have been no relationships observed between the acute toxicity of chloride to freshwater species and hardness, alkalinity, pH, or life-stage of the test organisms.

Chronic toxicity was studied in a life-cycle test with *Daphnia pulex* and early life-stage tests with rainbow trout and fathead minnow, resulting in chronic values of 372.1, 922.7 and 433.1 mg/L, respectively. The acute to chronic ratios were calculated as follows: 3.951 for Daphnia pulex, 7.308 for rainbow trout, and 15.17 for the fathead minnow. Toxic effects to freshwater plants were observed at chloride concentrations ranging from 71 to 36,400 mg/L. There are no data available regarding bioaccumulation of chloride by freshwater organisms.

At LLNL Site 300, the principal route of exposure to aquatic and benthic invertebrates (the ecological receptors of concern) is via ingestion (filtration). Chloride was present at Spring 14 in OU 4 (HE Process Area), and at Spring 4 in OU 7 (Building 854), with the maximum concentration of 278 mg/L (Spring 14). The U.S. EPA federal ambient water quality criterion for chloride is 230 mg/L (U.S. EPA, 2006). Based on the exceedance of this criterion in only one sample at Spring 14, there is insufficient evidence that exposure of aquatic species to chloride will result in adverse effects.

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Nitrate-Nitrite Nitrogen

Nitrate (NO_3^-) (Chemical Abstracts Services [CAS] No.14797-55-8) is an inorganic anion produced by the oxidation of elemental nitrogen. It is essential to plant protein synthesis and is a key component of the nitrogen cycle of soil and water (Stokinger, 1982). Nitrates are present in the environment from natural and anthropogenic sources; both biotic and abiotic oxidative processes contribute to their widespread distribution in natural systems (Ridder and Oehme, 1974). Many organic nitrate compounds are strong oxidizing agents and can explode from heat or shock; these properties have led to their manufacture for use in explosives (Oak Ridge National Laboratory [ORNL], 1995).

When ingested by mammals, nitrate is chemically reduced to nitrite (NO_2^-) in the oral cavity and in the gastrointestinal tract. The primary toxicity of nitrate is believed to be due to this conversion, in that nitrite binds to the heme iron of hemoglobin in red blood cells (Smith, 1996). The nitrite-hemoglobin interaction results in the formation of methemoglobin, an oxidized form of hemoglobin that can no longer bind and transport molecular oxygen (Smith, 1996). With the intake of sufficiently large quantities of nitrate, methemoglobinemia is induced – a condition in which the reducing capacity of hemoglobin is surpassed (Smith, 1996). However, the relationship between exposure to nitrate and the development of significant methemoglobin in mammals is species-specific, and depends on the rate and extent of conversion of nitrates to nitrites; the ability of different animal species to reduce methemoglobin, the amount of certain vitamins in the diet, and the overall nutritional status of the animal (ORNL, 1995). Information on the extent of the nitrate to nitrite conversion in non-mammalian species is not available.

For nitrates that are present in soil, the primary route of exposure to mammalian ecological receptors (ground squirrel, Kit Fox) is expected to be by ingestion. The receptors would be exposed to nitrates through incidental ingestion from grooming, digging, or similar behavior. Nitrates are absorbed through the gastrointestinal tract, and are distributed by the circulatory system to tissues and organs. The conversion or nitrate to nitrite is generally rapid, but depends on the pH as well as the composition of the bacterial flora of the oral cavity and the gut (ORNL, 1995). Nitrates and nitrites are water soluble, and the primary route of elimination is in the urine (ORNL, 1995). For the burrowing owl, no information is available on the absorption of nitrate. For nitrates present in surface water, the principal route of exposure to aquatic and benthic invertebrates (the ecological receptors of concern) is via ingestion (filtration). Information on the extent or significance of these exposure routes is not available, but toxicity data (see following) indicate that sufficient quantities can be absorbed to be biologically significant.

Nitrites can cross the mammalian placenta, and have been linked to fetal toxicity when oral exposure occurred to high doses (>4000 parts per million [ppm]) for prolonged periods of time. Much lower doses (e.g., 10 milligrams per kilogram [mg/kg]) were associated with slight delays in mammalian skeletal maturation (ORNL, 1995). Amphibians may be more sensitive than mammals to the effects of nitrate, in that the survival of frogs and tadpoles was significantly and adversely affected by exposure to

10 mg/L nitrate (Hecnar, 1995). Metamorphosis was affected by exposure of toad tadpoles to 11 or 23 mg/L nitrate (Xu and Oldham, 1997), and metamorphosis of frogs has been inhibited by 3.5 mg/L nitrate (Marco and Blaustein, 1999). Recently, Guiliette and Edwards (2005) have hypothesized that nitrate may interfere with steroidogenesis in reptiles, with potential subsequent impairment of reproductive function. In aquatic animals, the mechanism of nitrate toxicity is analogous to that in mammals, in that nitrate binds to oxygen-carrying pigments (either hemoglobin or hemocyanin), thus interfering with the ability of the pigments to transport oxygen (see e.g., Cheng and Chen, 2002). For aquatic receptors (benthic and aquatic invertebrates), exposure to nitrate may affect rates of maturation as well as reproductive success. A recent and comprehensive review (Camargo et al., 2005) cites toxic concentrations of nitrate-nitrogen (NO_3^{2-}—N) to invertebrates that range from 4.5 to 1000 mg (NO_3^{2-}—N)/L. These concentrations largely reflect lethality endpoints, and make it clear that there is significant species and life-stage sensitivity to nitrates.

At LLNL, nitrates are present in subsurface soils in Building 834 OU 2 at levels (maximum concentration 85 mg/kg) that exceed regional background (2 mg/kg). A qualitative comparison of subsurface nitrate concentrations to values associated with toxicity in experimental animals suggests that nitrate potentially poses a hazard to the mammalian receptors in this OU. However, the relationship between the subsurface soil nitrate concentration and potential adverse effects to these receptors cannot be quantified due to insufficient toxicity information i.e., there are no data by which to evaluate the rate and extent of nitrate to nitrite conversion. Similarly, nitrate to nitrite conversion data for the burrowing owl are not available.

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Perchlorate

Perchlorate is an inorganic anion that originates from the dissolution of perchloric acid and perchlorate salts containing ammonium, potassium, magnesium, or sodium cations (U.S. EPA, 2002). The most widely used perchlorate compound is ammonium perchlorate, which is the main ingredient in solid propellant for rocket motors. Perchlorate is a constituent of concern found in the soil, surface water, and groundwater at a number of military bases and manufacturing sites in Utah, Nevada, and California due to the manufacture, use, and disposal of solid rocket fuels (Urbansky, 1998; Smith et al., 2001; McNabb et al., 2004).

The primary mode of toxic action for perchlorate is the disruption of thyroid function resulting in decreased production of thyroid hormones and subsequent upset of thyroid homeostasis, resulting in the impairment of metabolism, growth, and development (Smith et al., 2001; U.S. EPA, 2002; McNabb et al., 2004; Tsao et al., 2004).

Perchlorate can persist for many years in soil, surface water, and groundwater (Urbansky, 1998). Perchlorate compounds are extremely soluble, with the exception of potassium perchlorate, which is regarded as sparingly soluble (U.S. EPA, 2002). Perchlorate does not appreciably sorb to soil or other mineral surfaces and does not degrade readily in the environment via ambient chemical (reduction) or biological (biodegradation) processes (U.S. EPA, 2002).

Perchlorate is metabolized very slowly (if at all) by higher biota such as plants or animals (U.S. EPA, 2002; Tan et al., 2004). Despite its high water solubility, perchlorate has been observed to bioconcentrate in plants and animals (Smith et al., 2001; Smith et al., 2004). However, because perchlorate was detected only in subsurface soil (OU 7), it is not expected to accumulate in plants at the LLNL site. The most significant exposure for ecological receptors at LLNL may be via the ingestion of soil containing perchlorate. The dermal contact exposure route is expected to be minimal because uptake of inorganic ions through the skin is frequently less than 1% and ecological receptors are protected by a barrier of fur or feathers (U.S. EPA, 2002). Inhalation is expected to be negligible because the vapor pressure of perchlorate salts and acids is expected to be low at ambient temperatures (U.S. EPA, 2002).

Table F-1 summarizes available recent and relevant toxicity reference values (TRVs) for perchlorate. Based on the studies included in the evaluation, mammals appear to be more sensitive than birds and amphibians to perchlorate exposure. However, screening TRVs developed by U.S. EPA (1999; 2002) are lower for birds than mammals indicating that there is some variation in the study results. It is important to keep in mind that the exposure values developed from the toxicity studies shown include the application of an uncertainty factor of ten as per the Department of Toxic Substances Control (DTSC) (1996a) and therefore have a built in measure of conservativism. Perchlorate was not analyzed in surface soil at Site 300 and perchlorate concentrations in subsurface soil are below 1 mg/kg, below U.S. EPA (2000) risk-based screening values.

At LLNL, perchlorate was not detected in surface soil but was detected in subsurface soil in OU 7 and in surface water in Well 8 Spring (Building 850 portion of OU 5). The maximum concentration of perchlorate in surface water of 25 micrograms per liter (µg/L) was well below U.S. EPA (2002) Tier II Secondary Chronic Value of 600 µg/L. The maximum concentration of perchlorate in subsurface soil was 0.79 mg/kg; a concentration below U.S. EPA's risk-based screening level of 1 mg/kg. Because perchlorate was detected only in subsurface soil, burrowing animals would be the only receptors exposed to soil containing perchlorate through incidental ingestion from grooming, digging, or similar behaviors. A screening evaluation of risk to the burrowing animals at LLNL from the incidental ingestion of soil containing perchlorate results in hazard quotients well below the threshold of 1.

This is consistent with the results of a study on raccoons from the Longhorn Army Ammunition Plant (LHAAP) conducted by the Strategic Environmental Research and Development Program (SERDP, 2003). Perchlorate surface soil concentrations at LHAAP ranged from below detection to 35.6 mg/kg. Raccoons were captured and blood and thyroid hormones were analyzed. Perchlorate plasma levels were below detection and thyroid hormones were not affected even though the raccoons were not only exposed to the soil incidentally but perchlorate was present in the raccoon's dietary items. The authors concluded that raccoons are not at risk from perchlorate at the LHAAP even at concentrations in soil as high as 35.6 mg/kg. Based on the evidence provided, perchlorate is not expected to present a risk to ecological receptors at Site 300.

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Phosphorus

Phosphorus as phosphate is a major nutrient required for plant nutrition and is essential to support life. Of all the elements required for plant growth in aquatic environments, phosphorus is most easily controlled by man. When present in excess of critical concentrations, phosphates are associated with a condition of accelerated eutrophication. Although it is generally recognized that phosphorus is not the sole cause of eutrophication, frequently it is the key element of all required elements of freshwater plants, and is generally present in the least amount relative to need.

There are several sources of phosphates in waterways: 1) the human body excretes about one pound per year of phosphorus (as P); 2) phosphorus detergents and domestic phosphates increases the per capita contribution to about 3.5 pounds per year of phosphorus (as P); 3) industrial contributions; 4) crop, forest, idle, and urban land phorphorus sources in drainage to water courses from rainfall surface runoff, effluent, or return flow from irrigation. Other sources include cattle feedlots, domestic duck or wild duck populations, tree leaves, and atmospheric fallout. Reservoirs and lakes collect phosphorus from influent streams and store a portion within consolidated sediments, thus serving as phosphate sinks. The amount of inflowing nutrients that may be retained by a lake or reservoir varies and is dependent upon: 1) nutrient loading to the water body; 2) the volume of the euphotic zone; 3) the extent of biological activities; 4) the detention time within a lake basin (time available for biological activities); and 5) the level of discharge from the lake or reservoir.

Nutrient removal from the aquatic ecosystem is expensive and difficult. Phosphates used by algae and higher aquatic plants may be stored in excess of plant cell requirements. During decomposition of the plant cell, some phosphorus may be released through bacterial action for recycling in the biotic community, while the remainder may be deposited in sediments. The phosphorus deposited in sediments within lake bottoms is bound to sediments and will not be recycled into the system.

At Site 300, total phosphorus was present in spring water samples from Spring 14 (HE Process Area OU 4) and Spring 4 (Building 854 OU 7), ranging from 0.13 mg/L at Spring 14 to a maximum of 4.0 mg/L at Spring 4. The water quality benchmark is 0.017 mg/L, based on a U.S. EPA study of nutrients in various regions of the United States (2001). The significance to aquatic invertebrates at Site 300 of exceedance of this benchmark is not clear, given that the criterion is based on plant growth. Importantly, total phosphorous has been identified as a COPEC based on extremely limited sampling data (3 samples at Spring 14 and 1 sample at Spring 4). Additional sampling is warranted to determine if the apparent elevated concentrations persist.

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Table F-1. Toxicity reference values recently developed for perchlorate.

Scientific name, common name	*Toxicity metric, endpoint*	*Effects-based exposure value*	*Study*	*Reference*
Rattus norvegicus, Sprague Dawley rat	LOEL of for histopathologic changes	25.9 mg/kg·d	2-generation laboratory exposure of pups to perchlorate in drinking water	York et al., 2001
	LOEL for brain morphometry	0.01 mg/kg·d	Laboratory exposure of pups to perchlorate in drinking water	Multiple studies reviewed in USEPA, 2002
	NOEL for development	0.85 mg/kg·d	Laboratory exposure of developing fetuses via exposure of dams to perchlorate in drinking water	York et al., 2003
Colinus virginianus, bobwhite quail	LOEL for significant reduction in thyroid hormone levels	130 mg/kg·d	56-d laboratory exposure of hatchlings to perchlorate in drinking water	McNabb et al., 2004
	LOEL for significant increase in thyroid weight	65 mg/kg·d		
	LOEL for significant reduction in tibia and femur length	260 mg/kg·d		
Xenopus laevis, African clawed frog	NOEL for immune response, blood chemistry, and growth	527,000 µg/l	150-d laboratory exposure of post-metamorphosis frogs to perchlorate	Sterner and Mattie, 1998
	LC50, NOEL for development	189,000 µg/l	70-d laboratory exposure of eggs and hatchling to perchlorate	Goleman et al., 2002b
	LOEL for forelimb emergence	4.2 µg/l		
	NOEL for tail resorption	4.2 µg/l		
	Concentration associated with skewed sex ratio, changes in thyroid morphology	50 µg/l		
Rana clamitans, green frog	NOEL for lethality	2,400,000 µg/l	4-d laboratory exposure of tadpoles to perchlorate	Dean et al., 2004
Lactuca sativa, Lettuce	NOEL for seedling growth	<80 mg/kg	28-d chronic seedling growth test in sand with sodium perchlorate	USEPA, 2002
		20 mg/kg		
		40 mg/kg	28-d chronic seedling growth test in soil with sodium perchlorate	

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